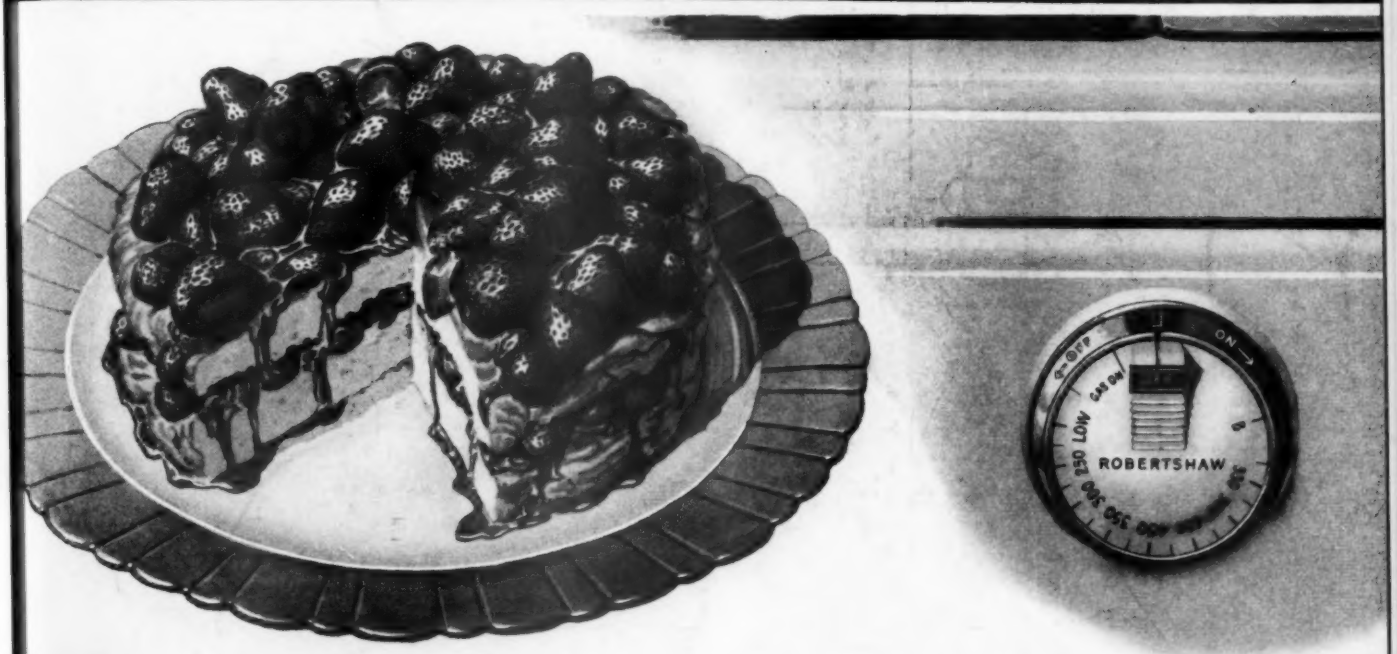
AMERICAN GAS JOURNAL

th YEAR | MARCH 1947 | VOL. 166, NO.



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Oven heat control will help you sell ranges

FREE FOR RANGE SALESMEN—The buyers' market is coming. This manual is a concentrated course in effective range selling. It provides readers with 38 pages of useful information for the day when selling will again be required. It shows how the modern range, used fully, can make savings in fuel and food that will soon pay its cost and leave a margin for other home appliances. Write for copies of "More Income For Gas Range Salesmen".

ROBERTSHAW THERMOSTAT CO.

YOUNGWOOD, PENNSYLVANIA

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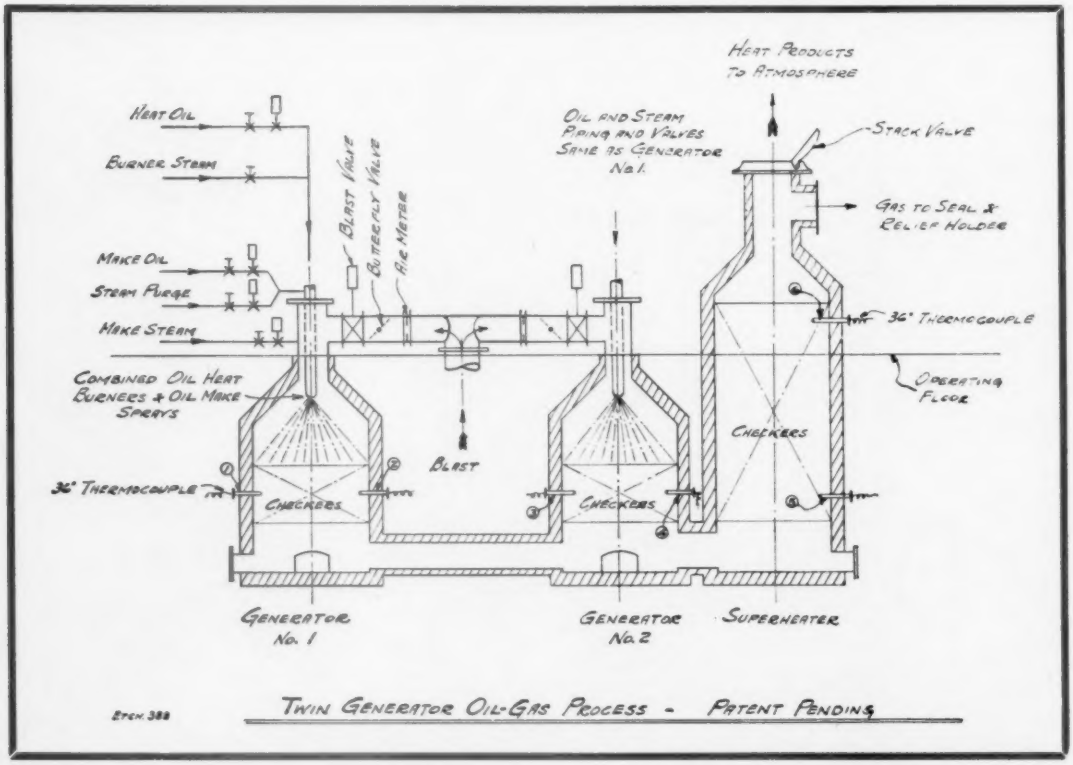
TWIN GENERATOR OIL-GAS PROCESS

For Production of 1000 Btu GAS



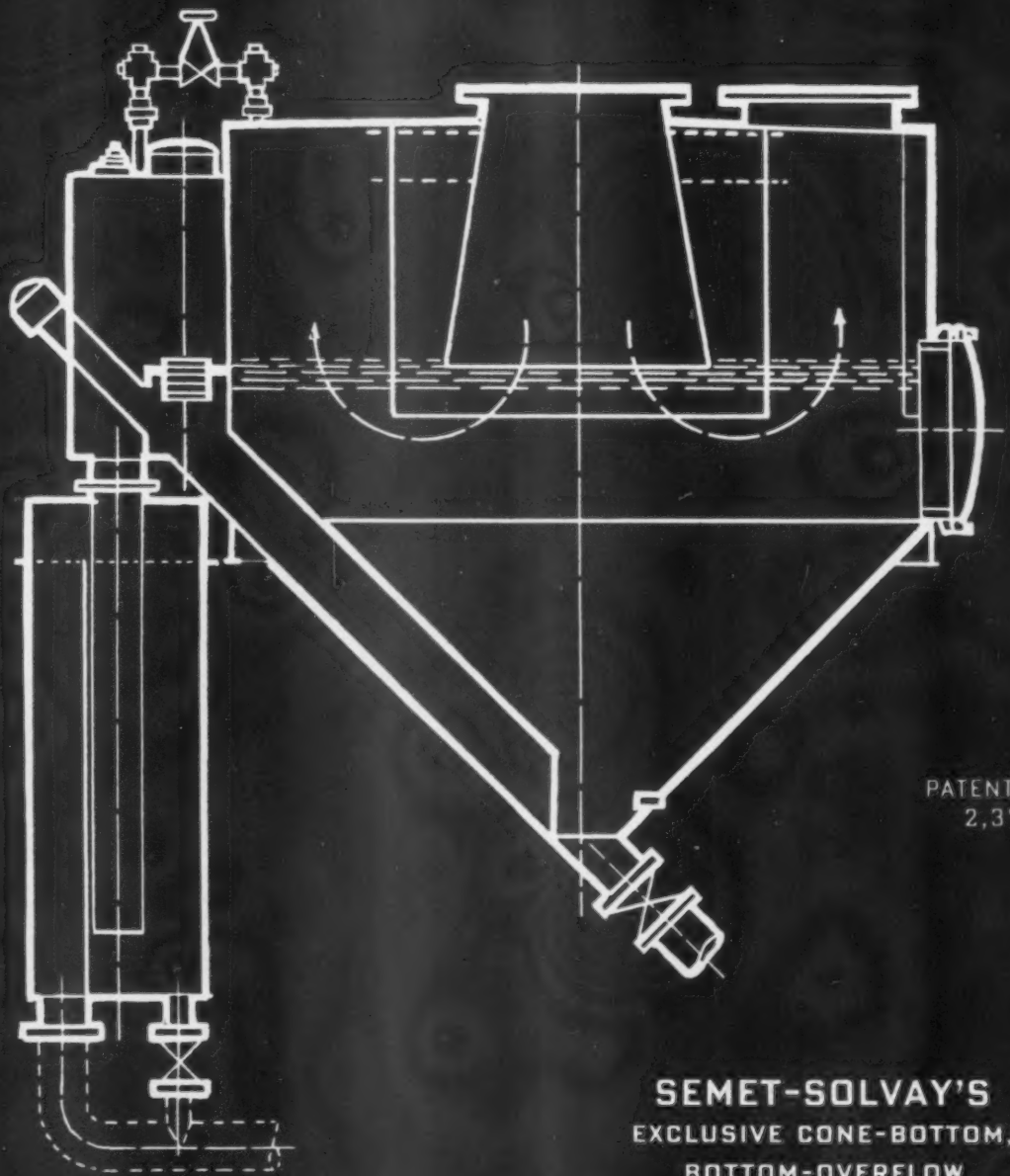
Gas Machinery Oil-Gas Process Patented and Patents Applied For

For peak-shaving and increasing thermal capacity of existing manufacturing and distribution facilities.

The GAS MACHINERY COMPANY

16114 WATERLOO ROAD • CLEVELAND 10, OHIO

AMERICAN GAS JOURNAL, March, 1947. Vol. 166, No. 3. Published monthly by American Gas Journal, Inc., at 34 North Crystal St., East Stroudsburg, Pa., Executive and Editorial offices at 53 Park Place, New York 7, N. Y. Entered as second-class matter October 7, 1928, at the post office at East Stroudsburg, Pa., under the Act of March 3, 1879. Printed in U.S.A.



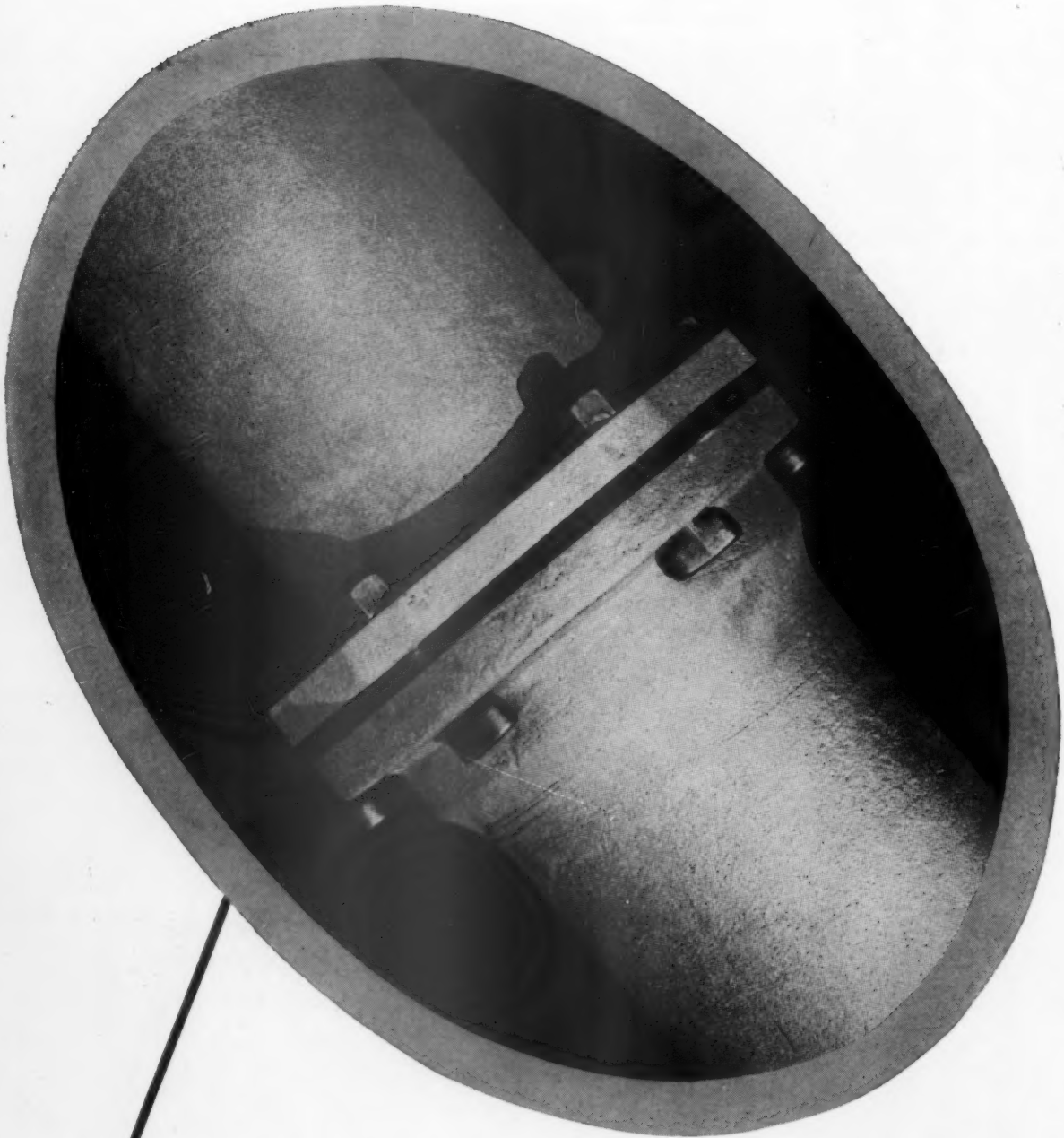
PATENT NUMBER
2,373,519

SEMET-SOLVAY'S
EXCLUSIVE CONE-BOTTOM,
BOTTOM-OVERFLOW
WASH BOX

UNINTERRUPTED OPERATION WHEN USING HEAVY OIL AS A CARBURETING MEDIUM. UNINTERRUPTED OPERATION FOR BLUE GAS TO AVOID PLUGGING DUE TO FINE ASH AND CARBON PARTICLES.

SEMET-SOLVAY ENGINEERING CORP. WE SELL SOLUTIONS TO HARD PROBLEMS NEW YORK

SEMET-SOLVAY
ENGINEERING CORPORATION
40 RECTOR STREET NEW YORK 6, N.Y.



CAST IRON

Standardized **MECHANICAL JOINT**

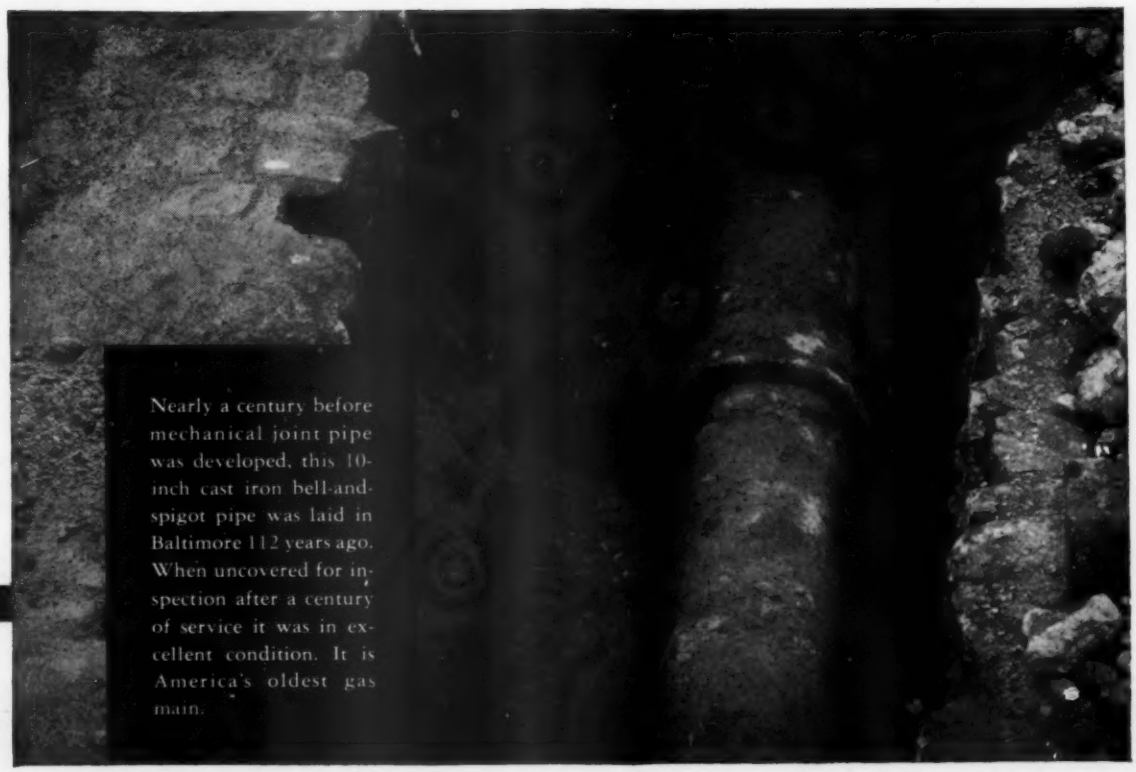
PIPE

NEWEST and OLDEST

The *newest* development in pipe with the *oldest* record of service to the Gas Industry is cast iron pipe with *standardized* mechanical joints. (See cut at left.)

The *oldest* cast iron gas main in America—as old as the Gas Industry itself — was laid 112 years ago in Baltimore by the first gas company to be granted a franchise in this country. (See cut below.)

The Gas Industry has its foundations, you might say, in cast iron bell-and-spigot pipe, and still specifies it for low and intermediate pressures. Cast iron *standardized* mechanical joint pipe, for *all* working pressures, is the newest in a long series of product and design improvements by our Industry. It offers *proved* long life, a bottle-tight joint, and a time-saving assembly with interchangeable parts. Cast Iron Pipe Research Ass'n, Thos. F. Wolfe, Research Engineer, Peoples Gas Bldg., Chicago 3, Ill.



Nearly a century before mechanical joint pipe was developed, this 10-inch cast iron bell-and-spigot pipe was laid in Baltimore 112 years ago. When uncovered for inspection after a century of service it was in excellent condition. It is America's oldest gas main.

A Gas Burner Manufacturer Is Known by the Company He Keeps

A Tribute to Our Ambassadors

Roberts-Gordon pioneered the gas conversion industry and today builds more units than any other company. Hand-in-hand with that growth has been the development of a splendid organization of factory representatives. We are proud that the companies who distribute our products represent the same ideals of integrity and progress which we have always used to direct our manufacturing policies. This advertisement is intended to pay them the tribute they deserve. May we present our ambassadors—*your* neighbors!

ALABAMA
S. C. BRATTON
405 American Life Bldg., Birmingham

Originally known as the Southern Industrial Engineering Company, S. C. Bratton has represented manufacturers under his own name since the 1930's. He has been a Gordon Spreader-Flame Representative in the south since the introduction of the Spreader-Flame burner.

ILLINOIS
R. C. W. OLSON
1223 S. Wabash Ave., Chicago

R. C. W. Olson is the owner and operator of this 16-year-old business which has represented the Ruud Water Heater Company since 1930. Mr. Olson has been representing Roberts-Gordon in Illinois and northern Indiana since 1933.

INDIANA
BROOKS MORRIS
8047 N. Capitol St., Indianapolis

In 1940, Mr. Brooks Morris organized the Heating Engineering and Sales Company. The firm has grown and expanded rapidly, an achievement which Mr. Morris attributes to the combined factors of 'quality equipment, professionally engineered and properly sold." Amen, say we!

KENTUCKY
GENE McDONALD
Lowell Ave. at Wadsworth, Louisville

A newcomer to the Roberts-Gordon family, Mr. McDonald has behind him eighteen years' association with the gas appliance industry. After traveling nationally for seven years as a sales manager for the Servel Co., he now returns to Louisville, his home town, to bring the benefit of his experience to Roberts-Gordon customers.

GORDON

Spreader-Flame
CONVERSION
GAS BURNERS

MASSACHUSETTS
HERBERT H. SKINNER
250 Stuart St., Boston

Now in its fifteenth year Skinner & Co. is headed by Herb Skinner, well-known throughout the New England territory. As manufacturer's representative, Herb has served utilities and plumbing supply jobbers since the business was organized in 1932.

MICHIGAN
E. C. LAMLEIN
12768 Grand River Ave., Detroit

A veteran of World War I, Edward Lamlein has crowded into his 53 years a wealth of experience in engineering, sales management and corporation direction. He has represented the Roberts-Gordon Appliance Corporation since 1937, in Michigan.

MISSOURI
RAY ROBERTS
4006 Papin St., St. Louis

Twenty-three years' experience in the gas utility business has prompted Mr. Roberts to initiate an aggressive sales promotion campaign to educate dealers on Roberts-Gordon Conversion Burners.

ROBERTS-GORDON APPLIANCE CORP. • *The Pioneers of the*

NEBRASKA
J. G. CAMERON
379 Insurance Bldg., Omaha

Sales manager of the Mid-West Utility Service Company, throughout Nebraska, Iowa, Colorado and Kansas. "Gunny" is another Roberts-Gordon factory "graduate." He is backed by rich experience in factory service and engineering and in western sales since 1929.

OHIO
R. E. LANDERS
3606 Dover Road, Westlake

A Roberts-Gordon factory sales "graduate," Ray Landers has over 20 years experience of a broad scope. In the Cleveland area he has operated both as a retailer of burners and, since 1933, exclusively as a manufacturer's representative in Ohio.

OHIO
F. J. SCULL
626 Broadway, Cincinnati

This Ohio representative has 40 years of experience in the gas-heating industry. Mr. Scull pioneered in his territory the sale of such equipment as unit heaters, gas radiators and gas conversion burners. He has represented Gordon since 1941.

PENNSYLVANIA
PORTER HURD
1500 North Eighth St., Philadelphia

A graduate in 1923 of the Harvard Engineering School, Mr. Hurd has had a diversified experience with gas utility companies. The organization of his company to handle the sales of industrial and gas space equipment culminates a long career of successful endeavor in the gas utility field.

PENNSYLVANIA
JOHN RIDGE
1505 Berger Bldg., Pittsburgh

A World War II overseas veteran, John Ridge organized his company in 1946 to serve the western half of Pennsylvania. Well known in Pittsburgh for his association in politics, public service, and real estate, Mr. Ridge now represents Roberts-Gordon in a territory rich in natural gas resources.

NEW YORK
W. A. HAMMOND
261 Highland Ave., Buffalo

Bill Hammond and his associates began to promote air conditioning and gas heating equipment back in 1934. Three years later, they became Roberts-Gordon distributors for New York State outside of metropolitan New York and the Rochester territories, as well as northern Pennsylvania.

NEW YORK
JOHN FULLERTON
292 Madison Ave., New York City

John Fullerton is a veteran in the gas industry with 35 years of experience selling and servicing to the gas utility companies and dealers. He has a highly trained and successful sales and service personnel and has succeeded in pyramiding his sales of Gordon Spreader Flame burners from 65 in 1928 to several thousand in 1946.

NEW YORK
WILLIAM J. GILLETTE
196 Chestnut St., Rochester

This introduces a new corporate name for an old friend. In combining his own interests with the former Cooling and Heating Company to form AHR Inc., Bill Gillette brings with him the benefit of fifteen years' experience in utility work and domestic and commercial heating.

TEXAS
E. H. DURNING
1067 Santa Fe Bldg. 2nd Unit, Texas

One of our more newly appointed distributors, Ed Durning has been a factor in the development of the heating industry in our southwest for over fifteen years. His representation of Gordon burners began in 1945—and to date augers a long and satisfying relationship.

UTAH
W. L. PETERSON
733 E. 3450 South St., Salt Lake City

Mr. Peterson preceded his affiliation with Roberts-Gordon by eighteen years in the manufactured and natural gas industry, specializing in sales promotion and advertising. Since 1944 he has devoted himself exclusively to distributing the Gordon burners.

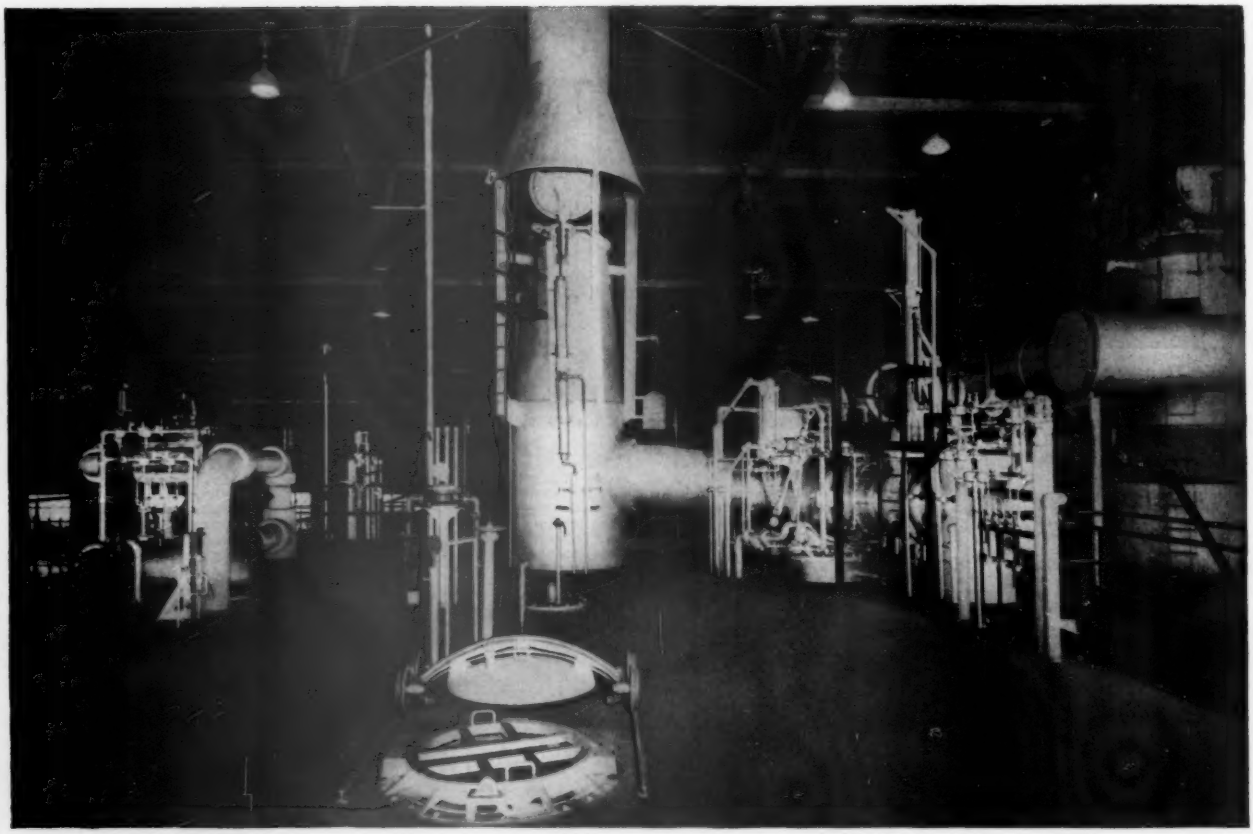
WEST VIRGINIA
R. GEORGE WALLACE
746 Nat. Ex. Bank Bldg., Wheeling

Northern boy makes good down South! George Wallace spent eight years in Buffalo, N. Y. with the Cooney Company, engineers and distributors of heating, ventilating and air-conditioning equipment. He now takes over the West Virginia territory for Gordon burners.

WISCONSIN
J. H. FAGAN
1022 N. Water St., Milwaukee

One of the first territory representatives appointed after the Gordon burner was introduced, J. H. Fagan has been a gas appliance manufacturer's representative since 1912. He distributes Gordon Spreader-Flames units in Wisconsin, Minnesota and the upper peninsula of Michigan.

Gas Conversion Industry • 137 ARTHUR ST., BUFFALO 7, N. Y.



ANOTHER UGI MECHANICAL GENERATOR NOW IN OPERATION

The fifth UGI Mechanical Generator Oil Gas Reforming Apparatus was placed into operation in 1946 at the Tilghman Street, Chester, Pa., Plant of the Philadelphia Electric Company. A sixth generator apparatus is now under construction.

The UGI Generator has proven its high degree of flexibility in meeting the operating requirements of this plant in its well known utilization of refinery gas as a raw material.

Another example of the flexibility of the Carburetted Water Gas Process which uses many different kinds of solid fuels and enrichers to produce enriched or reformed city gas of the specific gravity and heating value that is desired.

UGI

UNITED SERVICES PROVIDE

EXPERIENCE IN DESIGN
United has over 50 years experience in gas plant design.

EFFICIENT APPARATUS
United has pioneered major developments in water and coal gas production.

ECONOMICAL CONSTRUCTION
United has large well organized forces for gas plant and general construction work.

EXPERIENCE IN OPERATION
United has experienced plant operators for securing most efficient results.

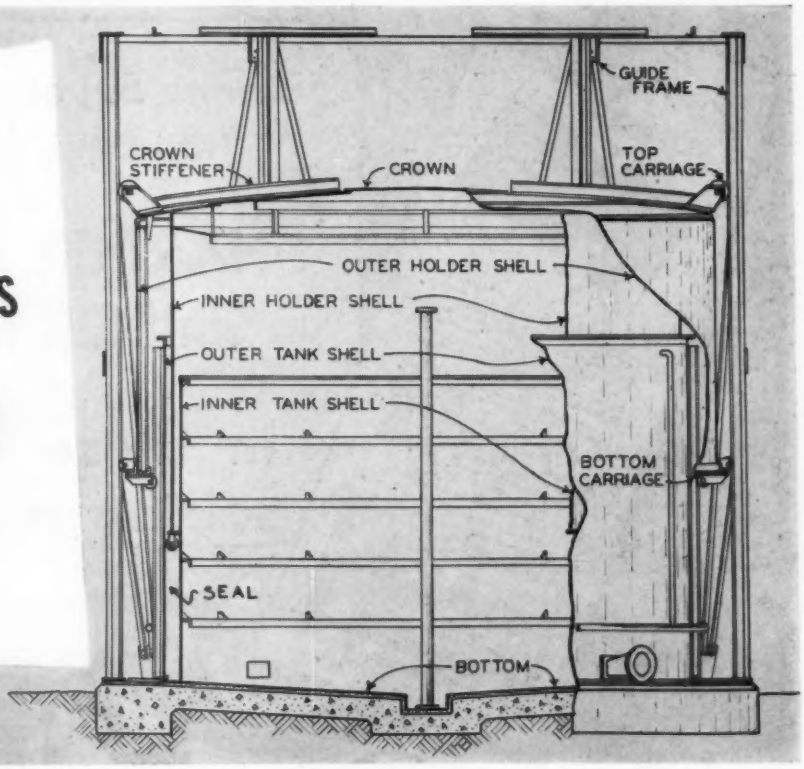
UNITED ENGINEERS & CONSTRUCTORS INC

NEW YORK PHILADELPHIA CHICAGO

ELIMINATE CONTAMINATION

IN THE STORAGE OF WATER-SOLUBLE PROCESS GASES

with the New Stacey Brothers Double-Shell Gas Holder*



Here's a single-lift gas holder that's an outstanding development for the storage of process gases. Regardless of the sealing fluid used, there's absolutely no chance of contamination by rain water —the design takes care of that.

And because the volume of sealing fluid required is only a fraction of the water ordinarily used in conventional single-lift holders, you can select the fluid to suit the gas—it's that economical, that practical.

On one installation, for example, our customer is storing N_2, saturated with water-soluble organic compounds—and using octyl alcohol as the sealing compound. The installation even provides for the recovery and re-use of the condensables.

The new Double-Shell Gas Holder is one more proof of Stacey Brothers' continuing leadership in providing storage capacity for gases. No matter what the limitations or how exacting the restrictions, we're ready to design, build and erect the gas holder exactly suited to your requirements. Let us know your needs—we'll carry on from there. No obligation, of course. May we hear from you?

*Patents applied for

STACEY BROTHERS GAS CONSTRUCTION CO.
One of the Dresser Industries
5535 VINE STREET • CINCINNATI 16, OHIO

Stacey Brothers
ALL-WELDED GAS HOLDERS

Range buyers read about the new, improved

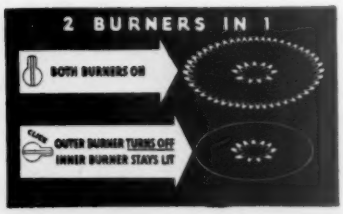
HARPER CENTER SIMMER BURNER

in these powerful selling magazines

"Word-of-mouth" advertising in the past sold more than a million and a half gas ranges equipped with the Harper Center Simmer Burner. And now, for the first time, we are telling your customers about this famous top burner, using the leading national magazines shown here. It means that some 21,500,000 women readers will know how to identify Harper equipped ranges.

It's easy to trade-up your customers to a higher priced range by *demonstrating* the many advantages of the Harper Center Simmer Burner...the "2 burners in 1" top burner that gives just the right heat for every cooking requirement. The measured heat of the Cooking Burner eliminates "pot-watching"... keeps kitchens cooler... requires so little water that vital minerals and vitamins are always retained, making foods tastier, more nutritious.

To help you sell more, and *better* ranges, we have prepared a FREE booklet, "How to Sell More Gas Ranges," which contains a series of quick, convincing floor demonstrations planned to dramatize the advantages of the modern gas range. Send for copies for your salesmen. Harper-Wyman Company, 8561 Vincennes Avenue, Chicago 20, Ill.



The Harper Center Simmer Burner operates on the unique principle of "2 burners in 1"...a STARTING BURNER for frying and to start foods boiling, plus a small, economical COOKING BURNER, to maintain the cooking... both controlled by the same handle. It is subject to finer gradations of low heats—greater control and economy—than any other top burner made.

HARPER CENTER SIMMER

"... Holds the Lines for Gas"

HARPER CENTER SIMMER BURNER

VOLUME 166
Number 3

AMERICAN GAS JOURNAL

ESTABLISHED 1859

WHOLE NUMBER 3876

MARCH 1947

PUBLISHED MONTHLY BY
AMERICAN GAS JOURNAL, Inc.
53 Park Place, New York 7

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Copyright, 1947, American Gas Journal, Inc.

Subscription $2.00 per year U.S.A.; $3.00 Canada; $4.00 Foreign. Single copies 25 cts.

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BUILD WITH AN EYE TOWARD THE FUTURE!

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40 RECTOR STREET NEW YORK 6, N.Y.

MARCH 1947

AMERICAN GAS JOURNAL

VOLUME 166 No. 3

Natural Gas Stored in Buried Pipe at 2240 Pounds

Equipment Includes Compressor, Regulators, Boiler and Heat Exchanger

By C. R. Claxton[1], M. G. Markle[2] and D. V. Meiller[3]

THE Public Service Company of Northern Illinois recently placed in service near Kankakee, Illinois, a natural gas storage installation of a design developed in their organization; consisting of fifty lengths of steel pipe, each forty feet long and twenty-four inches in diameter, and in each of which 25,000 cubic feet of natural gas is stored at 2240 pounds per square inch; the fifty lengths having a total storage of 1,250,000 cubic feet.

This installation, while useful and necessary for continued reliable gas service to the Kankakee area, is also a "pilot-plant" installed to demonstrate the advantages and determine any faults preparatory to making a much larger installation. The gas load of Kankakee and adjacent communities, with 9200 customers, is increasing rapidly because of the increasing population, greater use of gas for space heating, and an influx of new industries.

[1] *Engineer, Process Division, Stone & Webster Engineering Corporation.*

[2] *Gas Engineer, Public Service Company of Northern Illinois.*

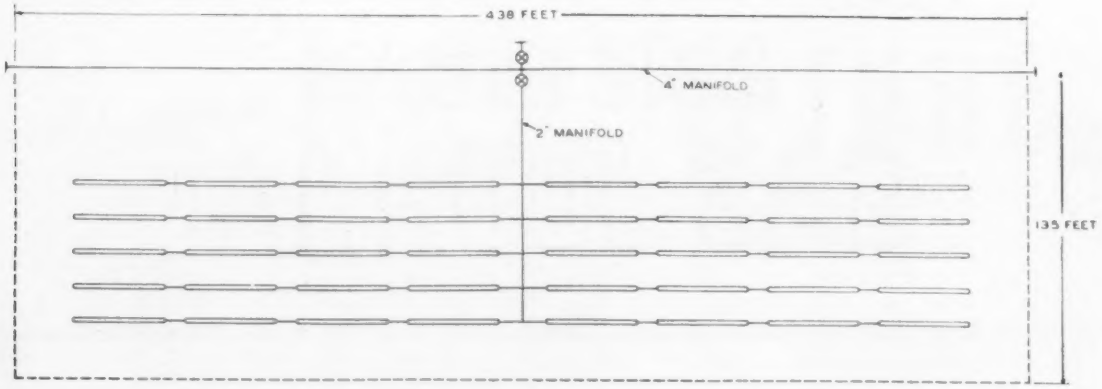
[3] *Senior Design Engineer, Public Service Company of Northern Illinois.*

The normal supply of gas to the area is through a high pressure distribution feeder main from Matteson, Illinois, some 30 miles north and east of Kankakee. The distribution in the Kankakee area consists of a central low pressure natural gas system where a carburetted water gas plant with two six foot sets and a 500,000 cubic foot commercial lift type holder are available for emergency use or peak shaving for the low pressure system only, there being no compressors for returning gas to the high pressure system serving the outlying areas and industrial customers. To assure, in the event of a temporary failure of the feeder main from Matteson, an emergency supply for high pressure customers and additional protection for the low pressure system, the additional storage of 1,250,000 cubic feet in buried pipe was installed on the opposite side of the city from the normal supply through the feeder main from Matteson. The storage together with the water gas plant and the lift type holder can supply the maximum load of the area for the length of time which might be required to make emergency repairs to the feeder main from Matteson.

Compressibility Factor

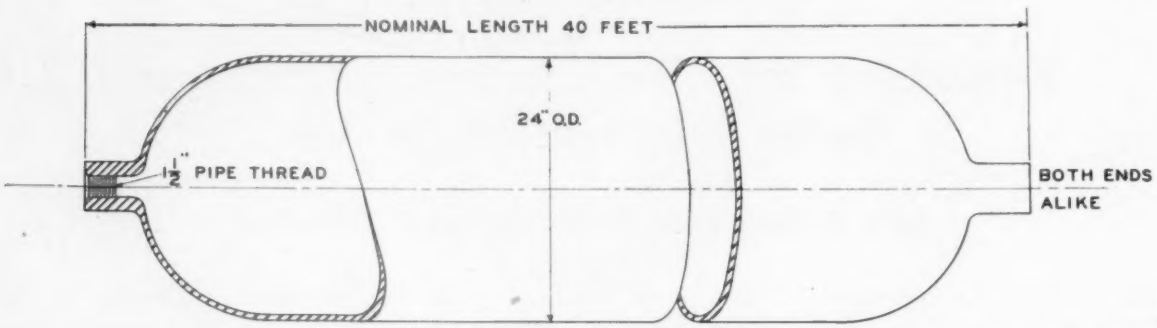
Of particular interest is the effect, in this type of storage, of the compressibility factor or the deviation from the laws of perfect gases of the natural gas stored. Fortunately, the maximum deviation occurs near 2240 pounds and is of such magnitude as to increase the storage capacity by more than 40% over that of a perfect gas, the compressibility factor "Z" (PV = "Z" NRT) being less than 0.70 at 2240 psi and 40° F. Thus, whereas approximately 160 standard cubic feet of a perfect gas could be stored per cubic foot of space, approximately 230 standard cubic feet of natural gas can be stored per cubic foot of space. This was dramatically demonstrated when ten lengths of special pipe were pressured to 2300 psi with 187,000 cubic feet of air whereas 260,000 cubic feet of natural gas was required to pressure the same ten lengths of pipe to 2240 psi. Also, a high pressure cylinder was pressured to 2240 psi with natural gas and the gas then carefully metered out in the laboratory. The metered volume was within 1% of the calculated volume. The nominal

GENERAL LAYOUT FOR STORAGE OF NATURAL GAS AT 2240 POUNDS IN BURIED PIPE



FORTY 40 FOOT LENGTHS OF SPECIAL 24 INCH PIPE

NOMINAL STORAGE CAPACITY 1,000,000 STANDARD CUBIC FEET



TEST PRESSURE 2800 LBS. PER SQ. INCH

storage capacity of the Kankakee installation is 1,250,000 cubic feet, however, the actual gross storage capacity is 1,396,000 cubic feet at 40° F storage temperature or 1,184,000 cubic feet at 60° F storage temperature. The net available gas from storage is approximately 25,000 cubic feet less than the gross storage.

Heavy Wall, Seamless Pipe

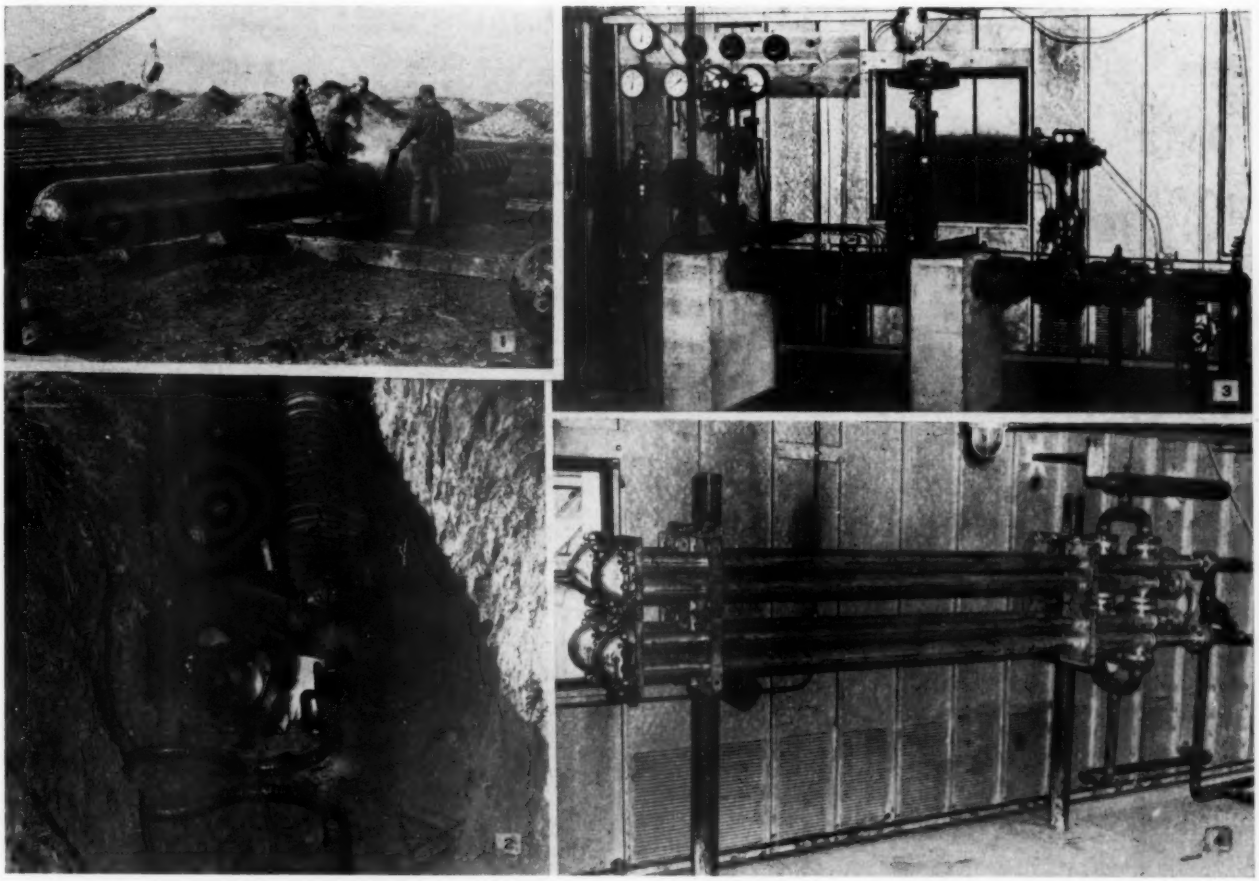
The operating pressure of 2240 psi conforms to the A.S.M.E.-A.S.A. Code for Pressure Piping Section 2, Division 2, and is 80% of the mill test pressure of 2800 psi. All piping other than the 24 inch special pipe conforms with Section 2, Division 1, of the Code for Pressure Piping. To withstand these high pressures, the special 24 inch OD seamless heavy wall pipe was made of A.P.I. N-80 steel which has a yield point of approximately 80,000 psi. The pipe has a minimum wall thickness of 0.448 inches and weighs approximately 5000 lbs. per forty foot length. In order to avoid field welding of the N-80 steel, each length of pipe, before shipment to the job, was swedged down on both ends, the ends rough bored, the pipe stress relieved and tapped on each end with a 1½ inch thread to A.S.A. specification B 2.1, 1945 Appendix J. Each length was hydrostatically tested to 2800 psi in a water filled jacket, which procedure permitted the detection of any pipe in which the yield point was exceeded under test. The fifty lengths of pipe installed at Kankakee averaged 39 feet 6¾ inches in length, and the average internal volume as determined by weighing when empty and when full of water was 109.66 cubic feet.

Layout and Dimensions

The arrangement of the special pipe was as shown in the diagram which illustrates the spacing and arrangement of 40 lengths, which makes up a "standard" 1,000,000 cubic foot unit of storage. The spacing between lengths of pipe was selected so as to facilitate installation, and so that a failure of any special pipe will not disturb adjacent pipes. The special pipes were spaced 8 feet end to end and 15 feet center line to center line. At Kankakee 40 lengths were installed as in Fig. 1 and the other ten lengths were installed as a part of a future "standard" 1,000,000 cubic foot unit. Two valves are installed in the field, one is a shut-off for the "standard" 1,000,000 cubic foot unit, and the other is a shut-off for the 10 lengths of pipe which in the future may be a part of a second "standard" 1,000,000 cubic foot unit. The special pipe has 3 feet 6 inches of cover to minimize seasonal temperature changes. All underground piping is coated and has cathodic protection.

Equipment

The storage installation consists, in addition to the buried special pipe, of a compressor for filling the special pipe, regulators for withdrawing the gas and a boiler and heat exchanger for heating the gas prior to pressure reduction. Since this installation is primarily for emergency use, and quick refilling is not considered essential, the compressor was selected on the basis of availability rather than capacity. The compressor is three stage with intercoolers but no aftercooler, and has a capacity of approximately 6,000 cubic feet per hour at 40 psig suction pressure. A 40 h.p. motor drives the compressor with V belts. The regulators and heat ex-



(1) Applying coating to the special pipe
(2) Installing an expansion bend between two lengths of special pipe
(3) Regulators reduce pressure in three steps, from 2240 pounds per square inch storage pressure to distribution pressure
(4) Tube withia tube heat exchangers are used to heat the high pressure gas with steam before reduction to distribution pressure

changer are designed for a withdrawal rate of 125,000 cubic feet per hour. The regulation which is in three steps, 2240 lbs. to 450 lbs. to 150 lbs. to 40 lbs., has interstage receivers equipped with relief valves. "Choke run" bypasses around the first two stages permit maintenance of flow rate as storage pressure decreases. A cast iron gas fired boiler with 590,000 Btu per hour input provides low pressure steam for heating the gas ahead of the regulators.

Operating experience to date has been satisfactory. The piping was tested with air at full operating pressure prior to introduction of gas, in order to facilitate safe repair of any leaks. No leaks were found in the 1½ inch threaded joints in the ends of the special pipes. These threads and the 1½ inch male threads of the 1½ inch expansion bends connecting the special pipes were accurately cut and were carefully gauged with special gauges, both at the mill and in the field, and field "make-up" of these joints was carefully supervised. Sample threaded joints had been previously tested and found tight under 3000 pounds gas pressure. Only one leak was found in a weld and no leaks were found in ring gasket flanged joints. A number of leaks were found at threaded joints made with "ordinary" pipe threads. Almost all such joints were then back-welded to insure tightness. Although no aftercooler was used, the temperature of the special pipe rose very little during filling. During a test in which the storage pressure was reduced 1200 pounds in about two hours, the temperature of the gas in storage decreased about 30° F.

This type of storage has many advantages. Since major facilities are underground, they are not subject to storm damage, are little influenced by atmospheric conditions, and there is no hazard to or from aviation. Since storage is in many small units, storage capacity may be added easily in any increments desired, and any unit may be taken out of service for repair or inspection without disturbing the remainder. A high precentage of stored gas is instantly available at distribution pressure. The investment, operating costs and maintenance costs are very attractive as compared to some other types of storage.

It is anticipated that the flexibility and obvious advantage of this type of storage will make it quite popular for certain locations and conditions.

Plastic Piping for Gas Services

Characteristics and Methods of Installation

By

Fred A. Herr

SOUTHERN California Gas Co. of Los Angeles had approximately 30,000 lineal feet of plastic pipe in use in service installations in various sections of its system early this year.

In February this footage, consisting of one-inch O.D. 1/16" wall thickness plastic tubing, S. A. Bradfield of the company's street division engineering department told *American Gas Journal*, represented about one-third of some 100,000 feet of plastic pipe which the company had acquired as a substitute for copper and steel pipe during the period of acute shortages of those materials.

In February the company had several hundred services of plastic pipe installation in actual use. Each such service, Mr. Bradfield estimated, involved some 60 to 70 feet of tubing. His overall estimate was that approximately 30,000 feet was then in use. These installations were spread in various districts of the company's territory in order to obtain further data on the effects of different soils on plastic from actual service installations. The firm's practice, based on the results of exhaustive tests with samples, has been to avoid installing plastic pipe in extremely rocky soil or in areas where the pipe might be exposed to wet gas, such as the Los Angeles harbor district and other refinery districts of Southern California.

Southern California Gas Company became plastic conscious in 1942 when it launched a search for possible wartime substitutes for copper and steel. The use of plastic materials at that time was on the ascendency in industry in general and plastic tubing as a substitute for copper, iron and brass piping in the plumbing trades, for instance, was at that time being produced in several plastic factories in the Los Angeles area.

Exhaustive Tests Made

Preliminary investigations conducted by B. M. Laulhere of the gas company's engineering department led to the decision to make exhaustive tests of plastic as a war-time replacement for steel service pipe. The company's distribution department then began an investigation into the potentialities of new plastic pipe fabricated by the Modern Plastic Company of Huntington Park, Calif.

This pipe is made from a base material named Tenite II which is fabricated from cellulose acetate butyrate, a compound that combines the use of sulphuric acid, acetic acid and butyric acid.

When the first test installations were made in 1942 the company used a simple plastic-to-steel connection which could be constructed in its own shops. The assembly consisted of a reamed nipple with a tapered steel insert. That type of connection, Mr. Bradfield explained to *American Gas Journal* early this year, was subsequently replaced with a flare compression fitting which more recently has been discarded in favor of a metal and rubber sleeve-type coupling. The flare compression fitting, he said, was found to deform the plastic material to such an extent that subsequent breakage sometimes occurred due to road shock or earth settlement.

Figure 1: The extreme lightness of plastic tubing is effectively demonstrated in this photograph in which a member of a field crew is shown supporting six 30-foot lengths of 1-inch diameter tubing on his thumb.

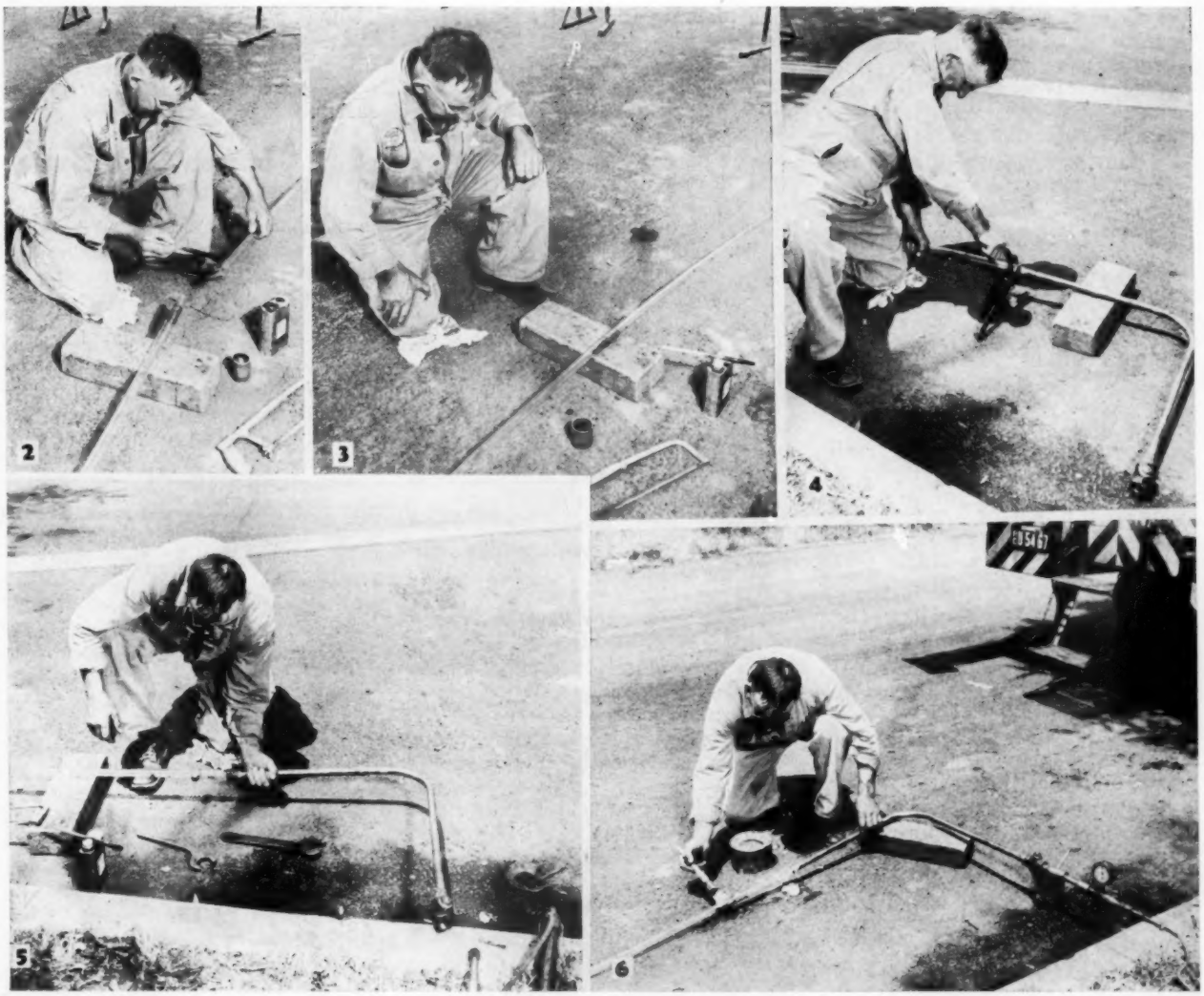
The selection of this type of pipe for further experimentation by the Southern California Gas Company, Mr. Bradfield declared, was influenced by the fact that it was obtainable at that time at a price nearly comparable to that of steel pipe, and by the further fact that it was found to be surprisingly light, extremely easy to handle and lent itself readily to joining in the field.

The plastic pipe used is notable for its extreme lightness. A man of normal size can support half a dozen lengths on one finger; a child can carry several strands. It is, nevertheless, reported to be quite tough and durable.

Some difficulties which have arisen since the first test installations were made nearly four years ago are now the subject of further tests being conducted by the company.

Connection Problem Still Unsettled

To the question as to what serious difficulty Southern California Gas Company had encountered that would indicate the impracticability of using plastic tubing for service pipe, Mr. Bradfield replied that "... the only serious difficulty that has been encountered so far has been in obtaining a suitable plastic-to-metal connection, and present indications from most recent tests are that the metal sleeve coupling with rubber gaskets may be the answer to this problem."



The procedure for assembling and installing plastic pipe which has been developed by Southern California Gas Company during the past four years is shown in successive stages. In Figure No. 2 two strings of plastic tubing, previously fitted with sleeve-type connectors, are laid out parallel with the trench, with the serviceman shown painting the joints with a solvent similar to acetone.

Figure 3: The two ends of the tubing have been fitted together and the solvent, by dissolving the surface of the plastic, causes a fusion of the pipe and sleeve to form a homogenous joint.

Figure 4: The riser end of the service assembly is made with copper pipe joined to the plastic pipe with a pre-assembled brass compression sleeve.

Figure 5: Joining of the plastic tubing to the riser end with a compression fitting is shown in this photograph.

Figure 6: In this view the serviceman is shown testing the assembly. These tests are made in conventional ways under pressure considerably higher than that which the pipe is expected to carry.

Referring to the method of joining sections of plastic tubing, Mr. Bradfield declared that the sleeve-type joint made with sleeves composed of short length of 1″ interior diameter plastic pipe enclosing the two ends of 1″ O.D. plastic pipe, and using acetone solution of Tenite II as a sealing compound, had proved most satisfactory.

Joints used in earlier tests had been of the ball and spigot type, made by "belling" or "flaring" one end and inserting into it the normal sized other end. The "belling" was accomplished by heating the tube in hot water and flaring it to a larger size while pliable. Acetone was used for sealing purposes in that type joint.

Mr. Bradfield declared that the sleeve-type joint had been found to be somewhat stronger and, on the whole, more acceptable than previously used bell and spigot joints. The Southern California Gas Company's engineering department had settled upon the sleeve joint as standard at the time the installations of plastic pipe were halted temporarily last fall pending the making of further tests on couplings. Sleeve joints, Mr. Bradfield added, are simpler to install because no hot water or special tools are required.

On the durability of plastic pipe and its ability to last as long in service as steel pipe, Mr. Bradfield commented as follows:

"Tests we have made have given us no reason to think that plastic pipe will not last as long as standard steel pipe. But it must be remembered that the longest any of our plastic lines have been underground is four years or so. We have found nothing that convinces us that, under normal conditions, plastic tubing would not

last as long as iron or steel. The ultimate life of plastic pipe, however, is still a matter of conjecture. When still existent minor difficulties in relation to connections have been overcome, we think that plastic will be a very satisfactory substitute for steel service pipe."

Cites Advantages-Disadvantages

Among advantages and disadvantages of plastic tubing cited by Mr. Bradfield are the following:

Field installation work is simplified. Plastic tubing can be cut with a few strokes of a hacksaw; field joints can be quickly and easily made; it is extremely light and one man can handle the entire length for one service installation; joints, other than service tees, need no protection. A grease coating with cellulose and Kraft paper can be used to protect the service tee connection, thus eliminating the need for hot asphalt which, Mr. Bradfield emphasized, *should not be used* with the plastic material.

Among the disadvantages, he mentioned that plastic tubing at present is not so accurately sized as steel or iron pipe and that diameter variations, occasionally as much as 10/1000ths of an inch, sometimes result in either too-loose or too-tight joints that reduce the effectiveness of the sealing agent.

Another disadvantage cited by Mr. Bradfield was the fact that plastic material is more subject to damage than steel. A jab from a shovel will cut it. Plastic tubing must be laid below the normal depth at which yards are cultivated. He pointed out, however, that service lines usually are laid 18 inches deep in customers' yards which provides a liberal margin of protection against damage from garden tools. Mr. Bradfield said that no instance of a plastic gas line being damaged by garden tools has come to his attention.

Field Use Test Conducted

Comprehensive tests were conducted by the Southern California Gas Company to determine the physical properties of plastic tubing. An early test was designed to determine its adaptability to field use. For this purpose a crew was instructed to replace a 1½" steel experimental line with a plastic line and to use the removed line as casing for the new one. This test, which was regarded as an experimental field test, also required the crew to install a plastic pipe extension to a 53-foot long steel line to bring the total length to 72 feet.

Bradfield reported that comments sought by the gas company from the members of the field crew disclosed that the workmen regarded plastic pipe as practical but thought that, in view of its softness, it should not be encased in old steel service lines which might contain projections which could damage the softer plastic material during installation.

Bursting Point at 600 to 800 lbs.

Laboratory tests were made to determine the tensile strength, bursting point and resistance against crushing. Tortures to which Southern California Gas Company engineers subjected the plastic tubing included burying it in various types of soil, inflating it to bursting point, burning it, allowing it to remain in freezing temperature for long periods of time.

The preliminary tests, according to Mr. Bradfield, showed the following results:

That plastic pipe has an ultimate strength in tension of approximately 5,000 p.s.i. at 84 degrees F.; that the test specimens withstood hydrostatic tests above 600 p.s.i. at 80 degrees F. and about 380 p.s.i. at 130 degrees F. that at normal temperature the bursting point is between 600 and 800 pounds, which is regarded as providing a substantial margin of safety.

Figure 7: The ease and convenience with which plastic service pipe can be handled is shown here as workmen place the preassembled plastic service line in the trench, bending it by hand to accommodate it to curves and jogs in the trench. The main is tapped in the conventional manner with a standard tapping machine and the main connection made with steel compression type fittings.

Impact Tests Prove Tubing Safe

Impact tests involved striking the plastic tubing at various angles and against sharp edges and at different degrees of temperature. The conclusions reached, Mr. Bradfield reported, were that at temperatures normal to Southern California the plastic tubing could be used safely in gas service installations since it did not shatter when struck at temperatures above 20 degrees.

Eight different tests also were made which involved the immersion of plastic samples in as many solutions. From this the company learned that natural gas saturated with Calodorant and natural gasoline produced a slight weight change in the plastic sample, Calodorant having the greater effect. However, according to Mr. Bradfield, the Calodorant used during the tests was in a ratio of 1000 to 1 as compared with the concentration that occurs normally in gas supplies.

Still other tests were made to determine soil effect on plastic. This involved burying a 2200 foot test string in beds of loam, sand and adobe, which are the three predominating soils in the area served by the company. Two sample beds of each soil were kept wet by continuous sprinkling, and two maintained in a naturally dry condition. Other samples were placed in soil impregnated with oil.

These tests disclosed that the plastic underwent no deterioration except in the bed saturated with oil. From the results of the various tests the company established the practice of installing plastic lines only in mild soil areas and avoiding extremely rocky districts and areas in which the pipe would be exposed to wet gas, such as refinery districts.

Assembly Procedure Worked Out

The procedure of assembling plastic pipe worked out by the company is as follows:

The lengths of plastic tubing are laid out along the route of the service line with the sleeve-type connectors previously attached. The sleeves at the end of two pipe strings then are held close together and the joint painted with a solvent similar to acetone. The solvent, by dissolving

(Concluded on page 58)

Safety Precautions When Installing Propane-Air Mixtures

By

L. R. Wenzel

Vice President, Gas Incorporated, Lowell, Massachusetts

THE PROPERTIES of propane and butane which make them of economical value to the gas industry also present hazards requiring proper design of equipment and safe methods of handling to prevent accidents.

Safety standards have been developed from extensive research, testing of equipment and years of experience. Safe practices and standards have been established as a result of cooperation of the Liquefied Petroleum Gas Industry with regulatory and insurance bodies such as the National Fire Protection Association, Association of American Railroads, Interstate Commerce Commission and the National Board of Fire Underwriters. These organizations whose primary thought has been to eliminate hazards and to promote safety in every way possible, have developed standards which kept accidents resulting from equipment failure to a minimum. Practically every accident connected with the transportation or utilization of liquefied petroleum gases has resulted because the person involved lacked sufficient knowledge of the product involved.

Characteristics

Before discussing any standards which are safety precautions, it would be well for us to discuss some of the inherent characteristics of propane and butane, so that you will more fully appreciate the need for the standards. These gases are obtained commercially from either natural gas or from gases produced in the refining of crude oil and are extracted by the absorption process, by compression, or both. By application of moderate pressures, these gases can be changed to a liquid state and in this concentrated form permit economical shipping, storing and handling. A tank car of approximately 10,000 gallon capacity has a b. t. u. equivalent of approximately one and three quarter million feet of manufactured gas. At atmospheric pressure, propane boils at minus 45° F. and at 70°F. develops approximately 125 p.s.i gauge pressure. Butane has a boiling point of 32°F. at atmospheric pressure and at 70°F. develops approximately 34 p. s. i. gauge pressure. It is evident, therefore, that at room temperature and at atmospheric pressure both of these fuels would be in a gaseous form, but because of their characteristics, can be kept liquefied at room temperature with moderate pressure.

Propane and butane have five characteristics different from the gases with which you are most familiar. Characteristics which are important for you to become familiar with when handling and utilizing liquefied petroleum gases follow:

(1) **They are normally gases, but are generally stored and transported as liquids under moderate pressure.**
(2) **They are non-poisonous and odorless in their normal state.**
(3) **As gases, they are heavier than air.**
(4) **Combustible mixtures can be formed with lower percentages of gas-air mixtures than most other gases, but the total combustible range is narrower.**
(5) **The pressure exerted by Liquefied Petroleum Gas in a container is entirely dependent on the temperature of the contents.**

Users of liquefied petroleum gases should always remember that although these gases are transported and stored as liquids for economy and convenience, they are normal gases and when liberated at normal atmospheric pressure and temperature must be treated as gases and not liquids. The Bureau of Explosives officially classifies them as "Flammable Gas." In case of an emergency, propane and butane should be treated as a gas and not a liquid. Since these gases are stored in liquid form under pressure, a container will hold this product in both the liquid and gaseous phase in equilibrium.

The toxic properties of propane and butane are so slight, that for practical purposes, they may be said to be non-toxic. It is true that they may cause death by suffocation in cases where not sufficient oxygen is present. The mild intoxicating effect should be sufficient to warn a person of high concentrations of these compounds, even though the vapors are not stenched. If necessary to work in an atmosphere containing propane or butane vapors, an air hose and mask should be provided, although if possible, it is better practice to purge or ventilate the tank or room in order to avoid the hazard of fire or explosion.

Propane and butane vapors are odorless in their normal state. Addition of an odorant in specified concentrations is in accordance with the standards established by the National Board of Fire Underwriters. These standards have been adopted as regulations by many states and even though state laws may not require the odorant, distributing companies make it a practice to odorize all products shipped.

In direct contrast with manufactured gas, these gases are heavier than air. Compared to air at 1.0, the specified gravity of propane is 1.52 and butane 2.01.

The specific gravity of manufactured gas varies from 0.40 to 0.70 depending upon the manufacturing process used. It is, therefore, important to remember that ventilation must be provided at floor levels instead of at upper room levels, as is the case with manufactured gas. Consideration should be given to the elimination or proper ventilation of pits.

The limits of inflammability for propane in air are 2.4 to 9.6 percent, and for butane 1.9 to 8.6 percent. This compares to manufactured gas at from 8 to 30 percent. Although a lower percentage of gas to air is required for combustion, the range is only approximately one fourth that of manufactured gas.

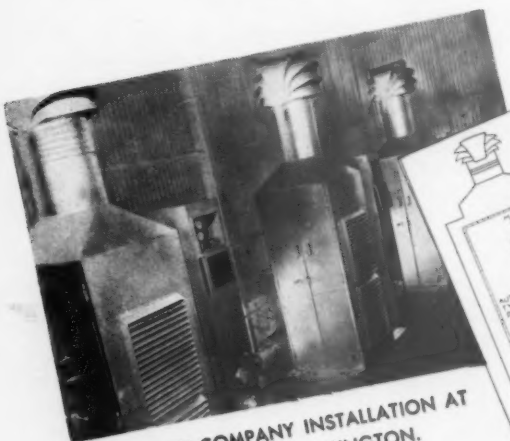
Handling and Storing

The last and probably most important of the characteristics listed above for the safe handling, storing and transporting of propane and butane is that the pressure inside the container is entirely a function of the temperature of the contents. If,

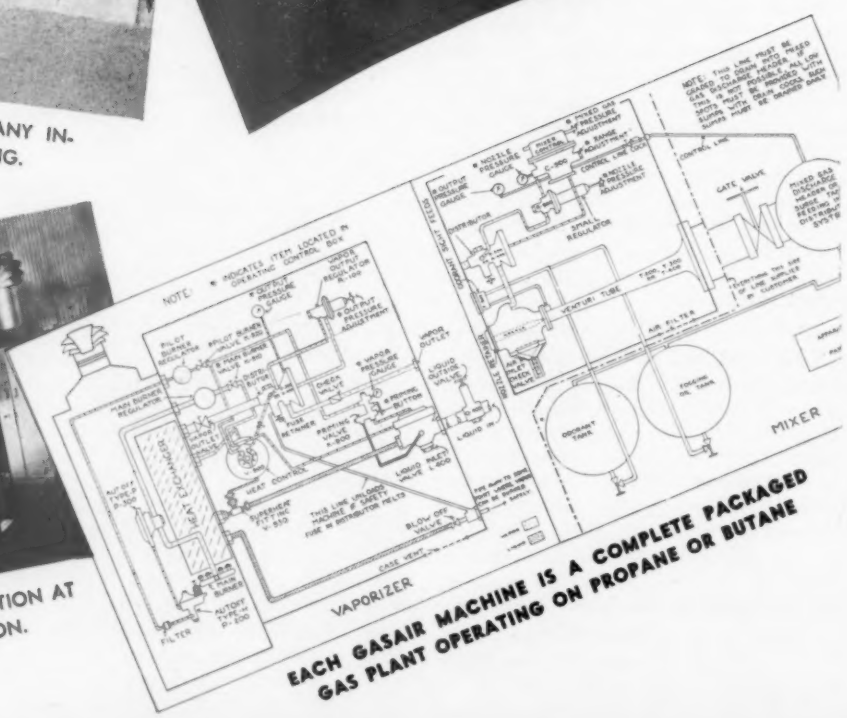
1 LARGE INDUSTRIAL STANDBY INSTALLATION AT MANSFIELD, OHIO. CAPACITY: 50,000 C.F.H.

From COAST to COAST

2 LARGE EASTERN UTILITY COMPANY INSTALLS GASAIR FOR PEAK SHAVING. CAPACITY: 500 M. C.F.H.



3 UTILITY COMPANY INSTALLATION AT WALLA WALLA, WASHINGTON. CAPACITY: 75,000 C.F.H.



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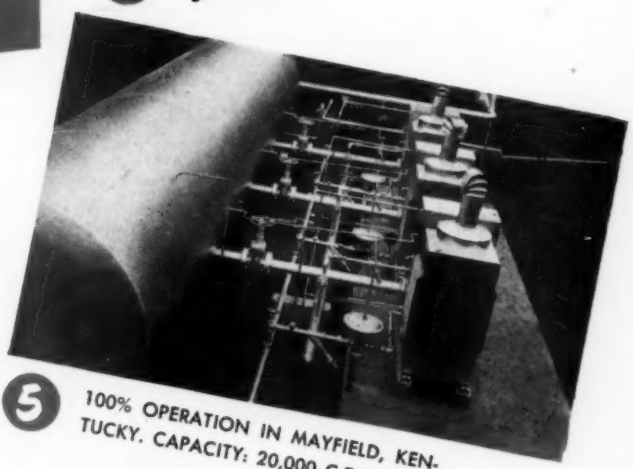
4 UTILITY COMPANY INSTALLATION AT MARSHALLTOWN, IOWA, FOR PEAK SHAVING. CAPACITY: 10,000 C.F.H.



5 100% OPERATION IN MAYFIELD, KENTUCKY. CAPACITY: 20,000 C.F.H.

6 NEEDLES, CALIFORNIA. USES GASAIR INSTALLATION FOR 100% OPERATION. CAPACITY: 20,000 C.F.H.

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due to an increase in temperature of the contents, excessive pressure is developed in the container, there are two methods of reducing it:

(1) by discharging gas from above the liquid, or

(2) by reducing the temperature of the contents. It is naturally preferable to reduce the temperature of the contents rather than permit the escape of high pressure gas with its resultant potential hazard.

The first handling of propane or butane with which most utility companies using these products are concerned is in car movements. These cars are of special design, and the Interstate Commerce Commission regulations provide the specifications for their construction. These rules do not allow any bottom connections to the tank, thus eliminating possible valve leakage. The gas is handled through connections in a manhole cover at the top which is not removable except for repairs or inspection. This arrangement controls the escape of vapors. The filling and discharge lines of these cars must be equipped with automatic excess flow valves, so as to shut off the flow of the product in case of a break in the unloading connection. Although many of these cars have been in serious wrecks, records indicate that in no case has a tank been ruptured or fittings mechanically damaged to a point where they did not perform the function for which they were intended. In cases where fire has originated from other sources causing an increase in the temperature of the liquid, safety relief valves have operated to prevent excessive pressure in the tank. Because of the fine safety record which is a result of the special construction of these cars, the American Railway Association is more liberal in their recommended distance of unloading sites from passenger rail lines for these cars than for oil and gasoline cars.

Unloading

Propane or butane is unloaded from tank cars by either the use of liquid transfer pumps or pressure differential method. Unloading equipment should be constructed and installed in accordance with the Standards of the National Board of Fire Underwriters as shown in their Pamphlet No. 58* which covers The Design, Installation and Construction of Containers and Pertinent Equipment for the Storage and Handling of Liquefied Petroleum Gases as recommended by the National Fire Protection Association.

Operators unloading tank cars should exercise the following precaution:

(1) Don't smoke around the tank car, storage tank, or vaporizer house,

(2) Locate "Tank Car Connected" sign,

(3) Ground the tank car before making connections,

(4) Keep automobiles and trucks away since they are a source of fire hazard,

(5) Use electrical equipment built and installed in strict accordance with Class I Group D requirements of the National Electric Code,

(6) Don't attempt to operate a propane or butane system without understanding the purpose of each valve,

(7) Open valves slowly to prevent excess flow valves from closing,

(8) Test for leaks only with soapy water or linseed oil,

(9) Check storage tank to be sure that there is sufficient space for contents of tank car,

(10) Be sure that all unloading connections are tight,

(11) Be sure to relieve pressure in unloading hoses before disconnecting,

(12) Don't get liquid propane or butane on your hands or clothes,

(13) Be sure not to hold your head directly over safety valve of gauging device.

(14) Proper fire extinguishers should be available. Water should not be used on liquefied petroleum gas fires.

Tanks and Accessories

Bulk storage tanks and accessories are the most important part of the L. P. Gas System. Care in their design, fabrication, installation and maintenance is important from a safety viewpoint. As a flammable product under pressure is being handled, storage must be designed to eliminate possibility of rupture and leaks. The use of the specifications of the Department of Public Safety in Massachusetts listed as Par. 66 and the codes set up by the A. S. M. E. for other New England states should be strictly adhered to by companies building these pressure vessels. Liquefied Petroleum Gas is not a corrosive material, therefore, inside corrosion is not a factor. The outside of above ground tanks should be given the best of maintenance and kept finished with a light-reflecting color.

The use of proper fittings and accessories on storage tanks is of utmost importance. All openings in storage tanks with the exception of safety valve and gauging device openings should be equipped with excess flow check valves which prevent flow in the event of pipe or valve failure. These should be placed immediately inside the tank opening. Tanks should be provided with a suitable gauging device for determining liquid contents, with safety valves and a thermometer well. Tank safety valves should have risers extending ten feet above the tank and discharging vertically upward without return bends or other obstructions that might deflect the gases back onto the tank. Liquid lines should have hydrostatic relief valves and where lines are of considerable length, added protection will result from the installation of excess flow valves. On large installations, it may be necessary to use two or more excess flow valves in parallel to handle the required capacity.

Vaporization

Propane and butane are stored in liquid form, therefore, it is necessary that they be converted into a vapor phase before distribution either in a diluted or undiluted form. This vaporization is carried on by either of two methods: (1) by application of atmospheric heat to the bulk storage tank and subsequent withdrawal of the vapor from the space above the liquid, or (2) by the application of artificial heat through the use of some type of heat exchanger. Because of the low boiling point of propane, it is estimated that a tank storing propane will vaporize one and one half times its liquid capacity each month by absorption of atmospheric heat. When butane or mixtures of propane and butane are used, it is recommended that vaporization be accomplished by the application of artificial heat. This is also the case where it is necessary to use a large quantity of propane in a short period of time. Artificial vaporization is usually accomplished by use of hot water or steam in a heat exchanger. The latent heat of vaporization for propane is 785 b. t. u. per gallon at its boiling point, and 808 b. t. u. for butane. Vaporizers should be installed in a special building provided expressly for that purpose and should be separated from the main buildings by a vapor proof non-combustible wall. The hot water heater or steam boiler should never be installed in the same room. A

See American Gas Handbook, 1945 edition, page 106—Ed.

safety relief valve should be installed on all vaporizers. Also, it is very important that provision be made to prevent liquid from leaving the outlet of the heat exchanger.

In using propane and butane vapors, it is necessary to give careful consideration to dew point of the product being used so as to prevent the hazard which may result from condensation or reliquefication of the product. At 0°F. propane vapor would liquefy at pressures over 24 p. s. i. Butane vapor must be over 35°F. for as low as 2 p. s. i. vapor pressure. At 0°F. propane-air of 800 b. t. u. can be used at pressures up to 110 p. s. i. and butane-air at the same b. t. u. and temperature can be used at pressures up to 18 p. s. i.

Because of the uniformity of propane and butane which are generally diluted from their original high b. t. u. value, 2520 for propane and 3200 for butane, to a lower b. t. u. value ranging from 500 to 1000 b. t. u.'s by mixing with air, which also has a relative consistency, little difficulty is experienced in the maintenance of a uniform gas. This uniformity is not only true for the b. t. u., but also the specific gravity, flame speed and combustion limits. To the average plant acquainted with the distribution of manufactured gas, this is quite an innovation and is one of the principal reasons for the substantial decrease in the customer complaint calls when distributing L. P. Gas-air mixtures. The mixing of the correct proportions of propane or butane vapor can be accomplished by a very simple or a very complex system depending on choice. Proportioning can be accomplished by use of fixed orifices, venturi type of inspirator, or by use of the more complicated systems such as Cutler Hammer-Askania, Selas Valve, Kemp Valve and McKee Diluter. Diluting equipment using atmospheric air for dilution must be provided with a positive means to prevent the back flow of gaseous vapor out through the air intake when the diluting unit is not in operation. Several accidents have resulted from failure of these shut-offs.

In conclusion I want to point out that if your plant is using or contemplating the use of propane or butane, your operators should become thoroughly acquainted with the five characteristics in which these products differ from the gases with which you are most familiar. Safety programs should be set up and revised periodically to train personnel with the inherent characteristics of these products as well as the proper operation of the equipment used in connection with these products. There always have been and probably always will be persons who have a complete disregard for precautionary measures established by persons competent to determine the need for precautions. Make every effort to keep this type person away from your L. P. Gas system.

Presented before Third Annual Safety Conference, The New England Gas Association, Boston, December 10, 1947.

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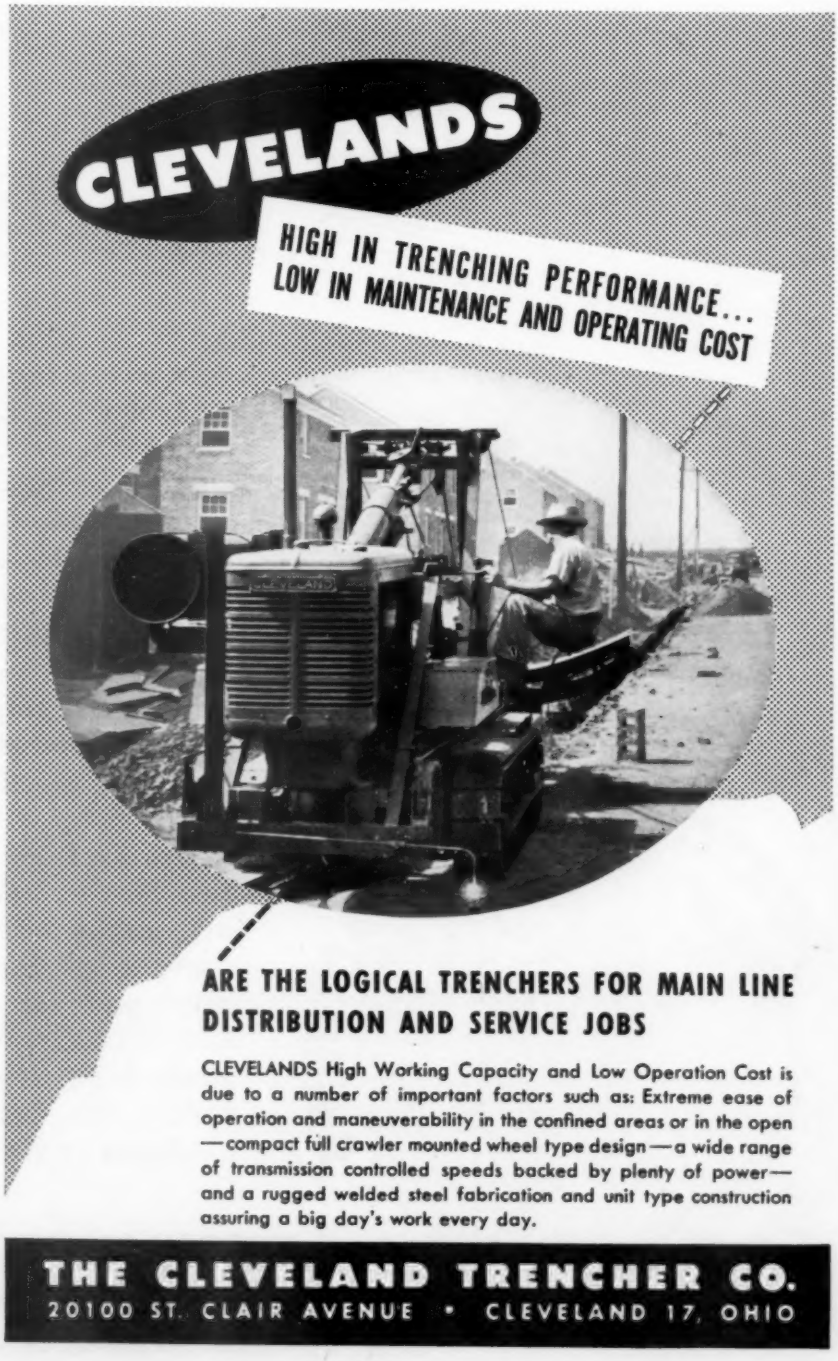
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Use of Compressed Air Tools in Clinker Removal from Water Gas Generators

By
Kurt H. Wolf
Superintendent of Production
Manchester Gas Company

BEFORE telling you about our experiences in Manchester relative to the use of air tools as an aid to removing clinker from the water gas generator, for your better understanding I wish to review briefly a few of our practices pertaining to this operation.

The set on which the tests were made is a U.G.I. 10′ 0″ machine, the generator of which is lined to 8′ 0″.

The use of hold-up bars while removing clinker from the water gas generator has long been a standard procedure in fire cleaning in Manchester.

While the employment of bars reduces the number of running hours possible per clean, it is also true that a higher fuel bed may be allowed to remain in the generator prior to the clean, necessitating a lesser amount of fuel for refilling before the resumption of gas making. By so doing, nearly full production capacity is achieved the first hour after starting up because set temperatures are again normal after only a few runs.

Generator fires are cleaned daily and the number of hours run per clean varies from twelve hours in mild weather to nineteen hours on a peak send-out day.

With the longer hours, the clinker formation was of such structure that it became necessary to clean fires twice a day on two or three days of each week. This not only meant loss in gas-making time on peak days, but necessitated over-time work the type which most men prefer to forego.

When the maximum number of nineteen hours was run on one clean, we found that the clinker formation had climbed well above the cleaning doors which made its removal much more difficult. Not only did the clinker climb during these longer hours, but became more firm as well.

Just at this time, when we were thinking of using air tools, the soft coal strike was in full swing. Therefore, in order to conserve hard fuel as much as possible, we decided to use more oil and reform some of the oil gases by passing them through the generator fire. This was done by extending the oil input period up to the time of steam reversal. As soon as the oil shut off, the steam flow was reversed, causing the oil vapors trapped within the carbureter and superheater to be swept through the generator fire. To compensate for this additional oil passing through the fire, a total of seven pounds of steam per minute was cut on the down steam to maintain the desired steam balance.

We have been using about 55% coke and 45% coal in the generator with no blow run. However, to maintain the desired gravity, a 4% blow run is now used.

This method of running cut the generator fuel approximately one and one-half pounds per M and reduced the height of the clinker formed over the doors sufficiently to allow easier removal.

A better approach to the clinker problem was in order and experiments with air tools began when we borrowed an old paving breaker from the Street Department, together with a few of the standard air tools.

The breaker immediately proved itself excessively heavy, unwieldy and difficult of control without the aid of some supporting device. As a result, 8 brackets made of 1¼″ angle iron were spaced evenly around the generator shell and welded fast six feet above the cleaning doors. A strip of flat steel 3″x¼″ was then shaped so that it could be placed on edge and welded to the top of the outer ends of the brackets to form a circular track.

A carriage for the track embodying two Ford Motor pulleys made a mobile unit from which to suspend a light set of Chainfalls used in carrying the paving breaker. In suspending the breaker from the Falls, an iron band was shaped around its middle in such a way that it could serve as a supporting collar and exhaust air deflector, keeping air out of the open generator door while in operation. The track embraces approximately three-fourths of the generator circumference, serves the six cleaning doors amply and well due to the mobility provided.

To reach the center of the generator with a pneumatic cutting bar, it was necessary to adapt one of the hand-type bars by welding an iron ring around the bar six inches from the end to hold it fast in the breaker. This bar, which is 5½′ in length, has a point instead of a chisel cutting edge. Both types were tried and the point shattered the clinker as well as the chisel type, while sliding off the face of the clinker did not occur as frequently.

The old type breaker did a reasonably good job but since we wished to equip both sides of the generator with air tools, we decided to take up the offer of the local Thor representative for a trial of his equipment, and asked to use his light #17 breaker. This unit performed very well in breaking the clinker but proved to be too light for driving in the hold up bars.

We therefore tried the next larger Thor #23 which proved to be adequate for this type of work. Also, it was found that this machine was of much faster action than our own from the Street Department with appreciably less kick-back on the operator.

To facilitate the driving in of the hold-up bars, another tool was fashioned from a piece of 3″ shafting 3″ long. A slot was cut the full length of this piece of shafting which would cup over the end of the hold-up bars. On the opposite side of the slot, a hole was drilled and tapped for a 1⅛″ bar 15″ long. Where the piece of shafting and bar joined, a weld was added for reinforcement. A steel ring was welded six inches from the end of the short bar for securing it in the breaker. This tool has enabled better and safer control in inserting the hold-up bars into the fuel bed. A curved bar is now being made to attempt to reach clinker formed over the doors.

The present source of compressed air is a portable compressor which is brought along the outside of the generator house. It is now planned to disconnect the portable compressor unit from the gasoline engine and move it indoors adjacent to the generator room. Conversion to electric power will then make this a stationary unit. Air hoses are kept off the floor and away from hot coals by being suspended from the walls just under the operating floor, which

(Concluded on page 58)

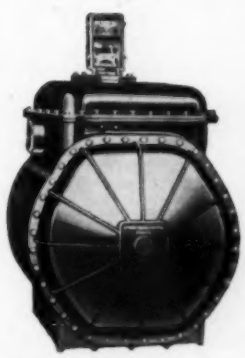
Your
cp
TRADE MARK

wife... WAS BORN IN 1859

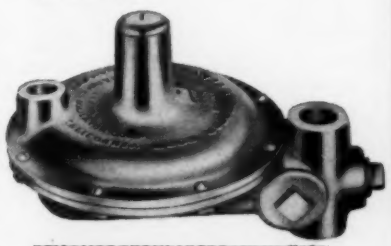
Your wife, strangely enough, might be the first to admit being "born" in 1859. It was then that gas began to make its place in domestic cooking in this country. It was a new birth for American women. From then on, they have enjoyed in ever increasing numbers the new freedom, the new life that the comfort, convenience and economy of modern gas appliances bring to the home.

From the beginning, American Meter Company has worked hand in hand with the Gas Industry. For 109 years, American Meters and, more recently, Reliance Regulators have met the exacting requirements of the industry for accuracy and dependability. Their quality is recorded "on the books" of gas companies from coast to coast.

AMERICAN TINNED STEELCASE METER... improved ten ways in the last ten years for better service.



AMERICAN IRONCASE METERS... accurate and dependable...full bellows diaphragms...one-piece, leakproof body.



RELIANCE REGULATORS meet all the requirements for automatic, dependable, sensitive pressure control of gases.

AMERICAN METER COMPANY

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Albany • Atlanta • Baltimore • Birmingham • Boston
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Kansas City • Los Angeles • New York • Orlando
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Manufacturers' Production Plans for 1947

Will the utilities in 1947, get sufficient domestic appliances to meet demands? Harold Massey, Asst. Managing Director, G.A.M.A. told those attending the Sales Section Meeting of the Pennsylvania Gas Association in Philadelphia on January 31st the situation amongst the manufacturers as of the present.—Ed.

AFTER studying all methods of gathering information and making predictions, I finally decided on a policy of taking a few sales figures from the industry statistics, which the G.A.M.A. regularly collects and have drawn some personal observations from some of these figures. I have also sampled the industry and asked leading executives for a word or two about their plans and I have tried to combine these opinions to make a composite opinion of the industry.

It was impressed upon me by the executives who contributed, that forecasting this year is extremely difficult and that their opinion represents hopes and estimates rather than a reliable, production prediction which might be made in ordinary years.

Despite continuing work stoppages and material shortages, manufacturers of gas appliances and equipment made substantial progress during 1946, in supplying the unprecedented demand for gas appliances. What the production picture will be in 1947 is almost impossible to estimate in the face of present conditions. Every manufacturer in the gas industry will do everything in his power to produce all the goods he can to fill customers demands and to assist dealers and sales outlets to carry on their business. Seldom in history, has the need of unhampered production been so essential.

Ranges

In the pre-war years of 1936-1940, we used to sell about 1½ million gas ranges per year. During the year 1946, and in spite of the problems which confronted manufacturers, they surpassed the 1936-1940 average production by several hundred thousand ranges. A substantial portion of range production was devoted to Federal Housing Programs and the number of "apartment" and "cooker" models produced was considerably greater than in the record production year of 1941, when the industry produced a little more than two and a quarter million ranges.

Range manufacturers production facilities have been increased more than 100% over pre-war capacity. The indications are that 1947 range production may not exceed the 1941 figure, or at best, the higher 1946 figure, due to the fact that manufacturers, in general, cannot expect to obtain more steel in 1947 than they received in 1941. Enameling sheet steel and castings are the two greatest uncertainties, as far as materials are concerned and, of course, another series of basic industry strikes would make 1947 production anybody's guess.

Range production during the first six months of this year should be at approximately the same rate as it was for the last six months of 1946. It is hoped that the material situation will ease by the middle of the year so that a larger quantity of ranges will be made available during the last half of '47.

Some manufacturers feel that the ultimate consumer is not buying quite so freely now as he did some months ago. They look for this to increase the pressure on the dealer, and in turn on the manufacturer, so that by mid-year, there will be a growing demand for new product which will result in extra effort by manufacturers to introduce new models during the last half of 1947, or at least early in 1948.

Carl Sorby is going to tell you a bit about this new product and what it will do and about the accessories which will help provide for the program that he will outline. Accessory manufacturers, clock control for instance, tell me that by the middle of 1947 they hope to be able to meet the entire demand of this program.

While we are talking about domestic ranges, you might be interested in a word or two about kitchen cabinets. The supply is increasing, and while it is far short of the demand, there should be enough of these cabinets available during the year to substantially back up the intensive promotion work which has been carried on in that direction.

It is true that you can't do much with a gas range on new housing if you do not have the meters and regulators to be used in making the installation. The increasing availability of materials needed by the manufacturers, tin and leather for instance, particularly during the second half of 1947, should make possible a considerable improvement in the production of both gas meters and regulators.

Water Heaters

Water heater manufacturers advise the same caution in making predictions, but the picture is a little brighter in this field. During the pre-war years, 1936-1940, we sold approximately 425,000 automatic water heaters per year. Our peak year was in 1941 when the figure reached 800,000. In spite of the difficulties of 1946, automatic water heater manufacturers did reach the 1¼ million mark. Much additional production capacity has been created by the enlargement of manufacturing facilities and several new manufacturers have entered the field. The old line companies are hoping for an increase of between 25% to 50% over their 1946 production, but 1947 figures will not be increasing until well after March 1st. The newer companies tell me that they are now beginning to roll and they are ready to make an impression on the industry. The picture ahead, therefore, is one of more production and consequently more competition and it is soon going to be time for the utility operator to plan to offset competition from competitive fuel appliances in this field.

The trend of the water heater industry is toward larger sizes of automatic gas water heaters to supply the increasing needs for new automatic home equipment and very definite improvements have been made in the construction of heaters.

Clothes Dryers

A companion business to the automatic gas storage water heater is the

automatic gas clothes dryer. This appliance presents a new, large and undeveloped market. Surveys indicate 20% to 30% of interviewed housewives are interested in an automatic dryer. One out of ten washer users is said to be a potential buyer for a clothes dryer. A large manufacturer of dryers expects that two-thirds of the dryers that he sells in 1947 will be the gas type, because it is easier to install and cheaper to operate. Gas dryers will be recommended in each instance where gas is used as the fuel for cooking.

Gas dryers are still very short, but a few are beginning to come through. It is a production line piece of equipment and once the material situation can be cleared away they will be produced quickly and in large volume.

Refrigerators

There should be some increase in the total number of gas refrigerators produced in the year 1947. This major increase will begin after the first of May and it is going to be dependent upon the continued acceleration in the receipt of steel and other materials. By May 1st Servel expects to be completely changed over to the new, really post war design in refrigerators, and their production facilities will have been stepped up to the point where, if material is available, they will enjoy a large increase over their prewar production.

House Heating

There is no need to tell you of the great increase in the demand for gas-fired heating appliances. The increase in the popularity of gas for this purpose has been just short of phenomenal.

In prewar years 10,000 gas boilers about represented our annual sales. In 1946 the sale of gas-fired boilers reached something like 25,000 units. The situation is the same with furnaces, 50,000 used to be a good year, but with all our troubles in 1946, we trebled this output. The conversion burner story is well known to you all. Twenty thousand or 30,000 per year was a big year before the war. If there were any way of totaling 1946 sales, we would find the figure reached more than 200,000 burners, possibly 300,000.

The availability of material for house heating equipment and the prospects of further increase in production have both materially improved recently. This is a natural expectancy since the number of strikes decreased after the large ones of last Spring and Summer. Moreover pipelines of supply and inventory are becoming filled.

A continuation of this progress is going to mean a considerable improvement in central heating appliances available for 1947 sales. Some manufacturers estimate that the supply will catch up with the demand on most items by the third or fourth quarter of this year and that a competitive selling situation will develop before the start of 1948. Due to the large increase in the number of conversion burner manufacturers and the number of restrictions in many areas on the supply of gas for heating, we have already reached this point on conversion burners. Gravity furnaces are quite generally available. 1947 is going to find heating equipment manufacturers producing a record volume and perhaps the major increase will be that in the production of gas-fired furnaces. Manufacturers, producing equipment for all fuels, are allocating additional percentages to gas-fired units.

All manufacturers of central heating equipment warn that, if the steel industry goes out on strike next month, prospects will change very rapidly for the worse and this will delay the anticipated accelerated increase in production.

Space Heaters

Space heater manufacturers feel that 1947 production is going to be limited as was 1946 production because of the shortage of sheet steel and iron castings. It is expected that these supplies will be better toward the end of the year and that there may be some increase in production.

During 1947 most of the older manufacturers are going to be under pressure to supply a greater volume than in 1946 to their substantial customers of long standing. They are going to make every effort to provide for these accounts and it is expected that they will do so.

Several new firms have entered the space heater business and hope to produce models using other than the traditional materials used heretofore and now in short supply.

Some of these new materials are now becoming quite scarce and deliveries are being delayed from this newer source. These newer manufacturers are going to influence changes in design and some of these changes will be introduced during 1947. Generally speaking, these changes will be just in appearance. Many manufacturers are also making changes in construction details in order to reduce cost of manufacture and in order to eliminate production delays caused by the shortage of traditional materials.

It looks as though the space heater supply will not meet the demand this year and that 1947 will be a year of continuing adjustment in this field.

Commercial and Industrial

In the hotel, restaurant and institutional field, the peak of "orders received" seems to have been passed and the demand is now slackening somewhat. The demand is still heavy and production will remain at high levels for months to come. While manufacturers are behind in delivery they are gradually beginning to catch

SUPERIOR GAS METERS

For Sound Values and Continuous Operating Economy

Meters for Domestic and Industrial Use. All Sizes 5B to 60C.
Wet Test and Demonstration Meters — Diaphragms —
Service Cleaners — Provers — Meter Repairs

Write for details and quotations

SUPERIOR METER COMPANY, INC.

167 41st Street ***Brooklyn 32, N. Y.***

up on their backlog, which it is hoped, will be absorbed entirely during the first six months of 1947, after which prompt shipments should again be the rule.

Surveys made by some manufacturers indicate that the hotel and restaurant trade are becoming very conscious of styling as well as efficiency and plans for the future are being formulated with that trend in mind.

Industrial gas equipment was produced during 1946 to the capacity of the plants engaged in this business. In spite of record production there is a large backlog of orders and actual shipment continues on a long term basis. Manufacturers are conscious of the extreme demand and some are considering expanding facilities to provide a greater productive capacity.

I want to impress upon you again the difficulty of making broad industry predictions in normal times and the particular difficulty of doing so in unpredictable times, such as we are now experiencing. I hope they will be of some value to you in your planning. You can help manufacturers at this difficult period in their experience by eliminating, wherever possible, demands for "specials." Almost all gas-fired equipment is volume produced for manufactured, mixed, natural and Liquefied Petroleum gases alike. When volume production has to be interrupted to build appliances to special requirements, the result is short runs, higher cost and delayed deliveries.

You may be assured that your manufacturers appreciate the present demand for the special equipment they make and you sell. They are making every effort to produce quality merchandise to meet this demand, to prevent any influx of competitive fuel equipment, and to relieve your sales organization of continued embarrassment.

Mid-Year Sales Conference, Pennsylvania Gas Association

The mid-year Sales Conference of the Pennsylvania Gas Assn., held at the Benjamin Franklin Hotel, Phila., Jan. 31st, had an attendance of 350. The largest on record.

G. M. Jones, Consumers Gas Co., Reading, Pa., was chairman. The welcoming address was made by Frank H. Trembly, Jr., Phila. Gas Works Co., and President of the association.

Harold Massey, Assistant Managing Director G.A.M.A., told the delegates what they could expect to get in the way of domestic gas appliances for 1947. Mr. Massey's paper appears elsewhere in this issue of the JOURNAL.

Ronald A. Maloney, Sales Manager, Bridgeport Gas Light Co., Bridgeport, Ct., talked on the subject, "Selling Helps for the Things We Have to Sell," in which he outlined the many helpful pieces of sales literature and other sales activities of the American Gas Association.

"The Dealer and the Utility" was the subject of a paper by Geo. P. Gable, Altoona, Pa.

E. Carl Sorby, Vice President Geo. D. Roper Corp., Rockford, Ill., talked on the subject, "From an Automatic Point of View," in which he discussed the up-to-date gas range.

A playlet, dramatizing the history and possibilities of the gas industry was one of the features of the program during the morning session. The pictures herewith tell the story.

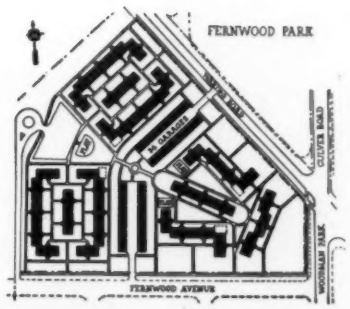
The hard working "steering committee" responsible for production of the skit presented at the Mid-Winter Sales Conference of the Pennsylvania Gas Association, January 31 at the Benjamin Franklin Hotel, Philadelphia. L to r. Homer Berry, Phila. Elec. Co.; C. E. Bartlett, Bill Briggs (behind curtain) and Sol Weill, both of Geo. D. Roper Corp.

FOUR DOMESTIC USES OF GAS PRESENTED IN TABLEAUX

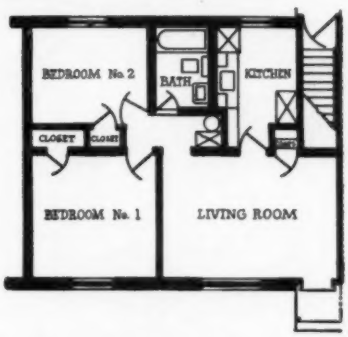
1: Gertrude Middleton of P.G.W. Home Service Division, typifies "modern Gas Cooking" in tableau presented during skit at P.G.A. Sales Conference.
2: Vera Cresta of P.G.W. Sales Department, depicts "Gas Water Heating".
3: Ruth Melvin of P.G.W. Sales Department symbolizes "Automatic Gas Heat".
4: Mary Burns of P.G.W. Sales Department is the spirit of "Gas Refrigeration".

Rochester Plan

PROVIDES LOW-COST RENTAL HOUSING FOR VETERANS AND THEIR FAMILIES



Thirty-eight four-family buildings on these ten acres provide apartments for 152 families. Project designed by architect C. Storrs Barrows of Rochester, N. Y.



Although exterior treatment varies to give these homes individuality, each apartment has the same pleasing, compact interior arrangement.

152 Bryant Winter Air Conditioners supply ideal indoor weather, individually controlled

The Rochester Plan, one of the nation's best solutions to the war-created housing shortage, is now a glowing reality . . . only slightly over a year since its conception by the eight banks of Rochester, N. Y. Operated by bank-owned Rochester Civic Rental Project, Inc., a non-profit company, the Plan provides modern living for service veterans and their families at extremely modest rental. Each apartment has three spacious rooms, bath and kitchen complete with range, refrigerator and electric disposal unit. Service facilities include a laundry center with automatic washers, garages and play areas for children.

A distinctive feature of the project is individual apartment heating, supplied by Bryant Model VB-6 Winter Air Conditioners. A vertical forced air unit, the Bryant Model VB is made especially for installation in apartments, basementless homes or any home where space is at a premium. Bryant Heater Co., 17825 St. Clair Ave., Cleveland 10, Ohio . . . *One of the Dresser Industries.*

bryant

GAS HEATING

LET THE PUP BE FURNACE MA

We're dramatizing the modernity of
Journal of Home Economics
what's new
New 1947 Servel stores a bushel of frozen foods
Famous Gas Refrigerator stays silent—lasts longer
BIG FROZEN FOOD LOCKER
Home economists applaud the famous Servel Gas Refrigerator for 1947
New models introduced at American Gas Association Convention in Atlantic City win approval of homemaking leaders
BIG FROZEN FOOD LOCKER
MOIST COLD, DRY COLD
NO NOISE, NO WEAR
"Ideal for homes"..."Will cut marketing trips"...
"Today's finest refrigerator value"—Typical comments of home economists viewing the new 1947 Servel.
SERVEL HOMEMAKER'S INSTITUTE
November 1946
KITCHEN
Servel Newsletter
Prepared for Kitchen Planning Consultants by Servel Homemaker's Institute, Evansville, Ind.
DECEMBER, 1946
HIGHWAYS in the KITCHEN
KITCHEN PLANNING SECTION

Gas to Home Economists

in exciting monthly ads and helpful new bulletins

Home economists, home demonstrators, and teachers of domestic science represent a powerful selling force in your community. Their professional opinions carry a lot of weight with the housewives who are buying Gas refrigerators and other modern Gas appliances.

That's why, month after month, we're hammering home the modernity of Gas and Gas Service to these important people with a double-barreled program—a steady stream of striking ads in their favorite professional magazines, *plus* a brand-new, free Newsletter service from the Servel Homemaker's Institute.

Vividly designed in two colors, hard-hitting, two-page ads headline the exciting news about the great 1947 Servel Gas Refrigerator. They dramatize its big Frozen Food Locker, its many other wonderful new food-storage conveniences. An easy-to-read, graphic explanation of Servel's different, more efficient freezing system emphasizes the exclusive Servel advantages of silence and lasting dependability.

Monthly Newsletter offers practical, up-to-the-minute homemaking hints

Supplementing this consistent advertising is the Servel Homemaker's Institute Newsletter. Mailed monthly to leading home economists the country over, this new service is chock-full of up-to-the-minute material for courses and lectures—tips on kitchen planning, food flashes, tested recipes and a host of other fascinating ideas. By boosting the authority of the Servel Homemaker's Institute as a home economics center, these helpful news bulletins subtly, but effectively, promote Gas and Gas Service.

Keeping homemaking professionals sold on the modernity of Gas is one more important way Servel is helping you win new friends in your community and increase your permanent gas load.

Servel INC. EVANSVILLE 20, IND.

A. G. A. Home Service Workshop

"If it helps to sell gas, back it to the limit." This was the opening theme of the Home Service Workshop held in Cincinnati, Ohio, January 20 to 23, 1947. The Workshop was sponsored by the Home Service Committee of the American Gas Association whose chairman is Mrs. Mary Belle Burnett, Home Service Director of the Cincinnati Gas and Electric Co.

Home Service Directors from 28 states made up the attendance of over 200. A 3½ day program full of subjects relating to the job of home service in 1947 was held in the home service auditorium of the Cincinnati Gas and Electric Company and in the Netherland Plaza Hotel.

W. M. Chamberlain, Chairman of the A.G.A. Residential Gas Section, set the theme of the conference in his discussion on ways in which home service fits into 1947 sales promotion. He pointed up the background of home service which allowed it to fit perfectly into the wartime activities of nutrition, food preservation and other work of civilian defense and from which experience now fortified with excellent public relations gives home service its work in residential sales promotion.

To describe the job of home service, Ruth Shank of the St. Louis County Gas Company, Webster Groves, Mo., represented it as "All Things To All Communities." She emphasized the need to make each home service department serve best the type of community in which it operated, and to do this it is important to participate in community activities to be fully aware of the trends in services.

In "product" information on the gas equipment with which home service works, the following subjects were presented: "CP Gas Ranges—Present and Future" by Paul I. Berno, Development Manager of the Tappan Stove Company; "The Clock Control" by Gladys Price of the Southern California Gas Company, Los Angeles, California; "Correction of Baking Complaints" by Joan Huck of the American Gas Association Testing Laboratories, Cleveland, Ohio; and a demonstration on "The Fourth Cooking Zone" by Rebecca Sullivan of The Gas Service Company, Topeka, Kansas.

The importance of the promotion of the Automatic Storage Water Heaters and a knowledge of its uses was brought out by W. D. Williams, Assistant Sales Representative of the Public Service Electric and Gas Company, Newark, N. J. Supplementing this discussion were talks on "Laundry Techniques" by Eleanor Ahern, Consultant to Procter and Gamble, Cincinnati, Ohio, and "What's New In Textiles" by Katherine Gerstenberger, Associate Professor of Textiles and Clothing, University of Cincinnati, Cincinnati, O.

The gas refrigerator was the basic discussion in "A Sales-Slanted Demonstration" by Elizabeth Lynahan of The Peoples Gas, Light and Coke Company, Chicago, Illinois. This was followed by a paper "Good Service on Gas Refrigerators" by William W. Marshall, Service Supervisor, Minneapolis Gas Light Company, Minneapolis, Minn. Mr. Marshall stressed the part home service can play in urging women users of refrigerators to exercise good housekeeping as important in getting good service. Miss Lynahan gave a truly "Model" demonstration —illustrating good techniques in performance and results and definitely "sold" the gas refrigerator to the listeners.

For the demonstration and also for the discussion of "Research Program on Kitchen Planning" by Clara Ridder of Servel Inc. a New Freedom Gas Kitchen was installed for the Workshop through the courtesy of Servel Inc. Kitchen arrangements based on Motion and Time Studies were illustrated by Miss Ridder through charts and pantomime oper-

Speakers' table at the Home Service Workshop. Left to right: E. R. Rothert, The Cincinnati Gas & Electric Co.; Helen Kirtland, The Ohio Fuel Gas Co.; H. Carl Wolf, American Gas Association; Mildred Clark, Oklahoma Natural Gas Co.; Hon. James Garfield Stewart, Mayor of Cincinnati; Mrs. Mary Belle Burnett, The Cincinnati Gas & Electric Co.; W. C. Beckjord, The Cincinnati Gas & Electric Co.; Jessie McQueen, American Gas Association; H. C. Blackwell, The Cincinnati Gas & Electric Co.; Ruth Shank, The St. Louis County Gas Co.; W. M. Chamberlain, Michigan Consolidated Gas Co.

ations. Ways in which home service can cooperate with kitchen planning were outlined by H. Vinton Potter, Director, New Freedom Gas Kitchen, American Gas Association, New York.

The fourth field of "product" information was discussed by Paul W. Craig, Manager of Industrial and Commercial Sales of the Equitable Gas Company, Pittsburgh, Pa. with the subject, "Cooking Equipment for School Lunchrooms." Mr. Craig considered the importance of cooperation with schools through their school lunchrooms and illustrated his talk with slides of different pieces of large equipment and their installations.

Home Service Operation

The Workshop program was purposely planned to consider the special interests of the newer people in home service. One entire session was given over to "Home Service On the Job." To get started in home service, particularly in the one-girl department calls for special planning on the part of the gas company sales department as explained by Carolyn M. Davis of the Nashville Gas & Heating Company in Nashville, Tenn. who outlined the plan sequence through which her program was set up and which in a year's time shows an active program of home calls, radio work and contacts with schools and clubs.

The progress report on a study set up to evaluate a cadet program for home service was outlined by Eleanor Morrison of the Michigan Consolidated Gas Company, Grand Rapids, Michigan. Miss Morrison is chairman of a study in the A.G.A. Home Service Committee on the value or need of such a cooperative program with students in Home Economics. Approximately two years will be needed before recommendations can be set up to determine whether the plan needs gas industry promotion.

The Session of "Home Service on the Job" continued with its attention to "Home Service As A Career," not only to attract students to home service, but also to give high school students a picture as to the value of home service economics as a study. One of the Career Records set up by the Ohio Fuel Gas Company was played for the group and introduced by Margaretha Ackermann of the Cincinnati Gas and Electric Company.

Home Service Techniques:

To carry out the promotion of product developments and special home service activities two new people in home service developed a skit conversation with the subject, "New Talent Evaluates the Home Call." This is carried on by two members of the home service department of the Ohio Fuel Gas Company—Betty Rauch of Mansfield, Ohio and Lois Snyder, Coshocton, Ohio.

Jessie McQueen, (left), Home Service Counsellor, American Gas Association, and Mrs. Mary Belle Burnett, Chairman A.G.A. Home Service Committee and Home Service Director, The Cincinnati Gas & Electric Co., photographed at the Home Service Workshop.

"Demonstration Ideas" was the subject discussed by Colleen Fowler of the Gas Service Company in Kansas City, Mo. and this was followed by Mary Huck of Ohio Fuel.

In concluding the program Jessie McQueen, Home Service Counsellor of the American Gas Association, Inc., New York, reviewed some of the principal trends brought out in the program and then emphasized the need of a review and study of the "tried and true" methods which have brought commendation to home service over its years of operation—which had won friends for the gas company and developed confidence in the women customers in the community that the home service department in the gas company was a source of reliable homemaking information.

Social Hours following each day of the conference were a popular contribution to the proceedings of the Workshop. These occasions were given through the courtesy of the Hardwick Stove Company, Tappan Stove Company and Servel, Inc.

Members of the Program Committee served as presiding officers of the conference sessions as follows—Mrs. Mary Belle Burnett, Mildred Clark, Helen Kirtland, Ruth Shank, and Jessie McQueen.

Walter C. Beckjord, President, The Cincinnati Gas & Electric Co., addressing the Home Service Workshop. Seated at the left is the Hon. James Garfield Stewart, Mayor of Cincinnati, who welcomed the delegates to the city.

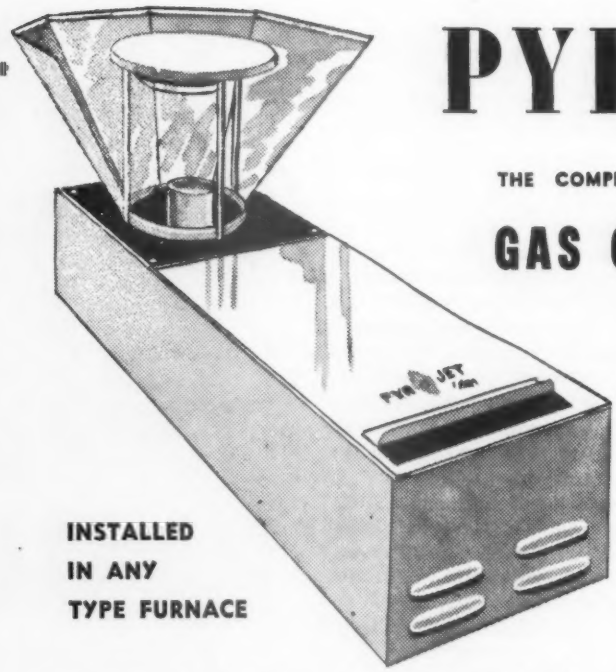
it's New! it's amazingly efficient! it's ready NOW!

PYRO-JET

THE COMPLETE SELF-CONTAINED

GAS CONVERSION BURNER

Immediate Installation



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There are Two Sizes

MODEL B For homes up to 6 Rooms
Input 175,000 BTU. Price $69.

MODEL C For larger homes
Input 220,000 BTU. Price $72.50.

The Pyro-Jet Gas Conversion Burner is uniquely designed for simplicity, safety, economy and efficiency. Electrical units are isolated from Gas Controls—and all completely housed in heavy gauge steel. Heat is confined to the combustion chamber and specially designed deflector plates convert the gas flame to a high heating radiant flame. Thermostat heat control.

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A Solution to the Conversion Burner Problem

By

W. H. Wise

Manager, Sales Engineering
Peoples Gas Light & Coke Co.

THE TITLE given my portion of this program namely a "Solution to the Conversion Burner Problem," is one that sounds highly technical, therefore, the solution offered in my remarks shall be from the view of a Sales Engineer. Inasmuch as, the term sales engineer has been constantly abused and will appear frequently in this discussion, I shall give our definition of this term. An engineer is a person who accomplishes a result by dealing with things. A salesman is a person who accomplishes a result by dealing with people. A sales engineer is one who accomplishes a result by dealing with things and people.

The gas space heating industry is at present suffering from growing pains. These pains for which the industry was clamoring, and for when they came, we were not ready. Someone has said that industry has surveyed, surveyed and surveyed, so that by the time the real problem arrived they were too exhausted to do anything about it. This is certainly a partial truth pertaining to the gas conversion burner.

Are we the same people who while clamoring for the space heating business in the "trembling 30's" talked so long and so loud about the merits of our fuel that the general public believed what we were saying, while we did not believe ourselves. I say this because had we believed what we were saying, and had we the common sense to look about us and analyze our economic position, we most certainly would have been nearer ready for this infant to grow into manhood. Many gas space heating manufacturers realized this acceptance, else they would not have planned the plant expansion that in many cases has been affected. And yet we people in the gas utility industry who should know more about our business than anyone else, who certainly should know our customers and their reactions, better than anyone else, are caught short with literally thousands of poor conversion burner installations on our lines, because we did no protective planning for giving our public something better. Certainly we shall pay in high service costs, dissatisfied customers and last but greatest, in the loss of prestige for our fuel and to your company who did nothing effective to protect its customers. The plan as followed by our company was based first on the protection of its customers, second on the protection of ourselves and fuel, and third on the protection of a market for the legitimate manufacturer.

Rise in Sales

The rise in the percentage of sales in conversion burners today can be attributed to several factors. To better judge how to protect all concerned we may well analyze these factors.

First — The process of manufacturing this device is relatively simple. Too simple in fact, and the requirements for listing with which these manufacturers were faced certainly have contributed to machine shop and hole in the wall operations.

Second — The manufacturers of gas designed equipment faced with maladjusted economic conditions have not been able to come close to filling the pent up demand for their product. Thus many who have purchased conversion burners would not have done so if gas designed equipment had been available.

Third—The price differential between oil, coal and gas in most areas is a thin line and some utilities have encouraged the sale of any conversion burner that would give them another space heating installation.

We realize that for our remarks to be of any value all or some portion of the solution of this problem must be applicable nation wide, therefore no detail of our overall program will be omitted. The support of management is necessary before a constructive program can be attempted. A half hearted attempt by we lesser lights in our companies will have an ultimate result of making many enemies and accomplishing nothing. Money, manpower and the willingness of management to go all the way on a recommended program of dealer cooperation is imperative if the prestige that comes from direct selling, dealer contacts and dealer cooperation is to be effective so that a recommendation by the utility based on sound customer protection will be received favorably by all sources. We believe the following policy of dealer cooperation plus those responsibilities by the utility involved to be necessary in the control of the sale and installation of conversion burners. It is our policy to give our customers the opportunity of buying gas burning equipment wherever their preference dictates by conducting all our sales and sales promotion activities in a manner which dealers throughout the city can maintain a profitable business in the sale of gas equipment.

Gas Customer Purchases

We hope to make it possible for our gas customers to purchase equipment wherever they please and in whatever section of the city they may choose. Our prime concern is that the customer buys the right kind of gas equipment rather than where he buys it. As long as the appliance and its installation provides safety and economic service our purpose as a gas company is served equally well whether the actual appliance is purchased from a dealer, contractor or ourselves. It is our policy to sell only gas equipment of high established quality. High quality, laboratory tested gas burning equipment is normally available from many manufacturers. It is our policy to display and sell equipment of manufacturers whom are representative of this group.

In this way we help to encourage the broad public acceptance of the better types of equipment. Further by so creating a high acceptance market for high grade equipment, we help make it possible for the dealer to sell up to quality rather than down to price. We will not upset the dealers market so established for better types of equipment by introducing into the Chicago area products of lesser quality. It is our policy not to compete with outside dealers for gas conversion burner sales. Our established program of dealer cooperation requires that we aid dealers to sell rather than to try to take the business away from them. In

any instance where we have knowledge that a customer is intending to purchase a gas appliance from a dealer we will encourage the customer to close the sale with the dealer and not try to write it ourselves. The only exception to this policy would be contained with those cases which it is felt that the customer is being poorly advised, where neither the customer nor The Peoples Gas Light and Coke Company would be happy with the equipment proposed.

Our Policy

It is our policy to require that all installations of conversion burners by contractors be made in accordance with our installation requirements. The responsibility of what equipment goes on your lines should be placed. With this responsibility should go the authority to do something about it. Does anyone in your company know what constitutes a good conversion burner installation? Does this person have the responsibility and authority to seek out manufacturers of this equipment and offer an attractive market for their product? Does this person have the help to train legitimate installers of this equipment? Will your company say to its customers here is what we recommend for a safe, efficient, service free gas heating installation? Or does your company rest on its laurels and keep hidden from its customers the very heart of its program to protect them. The dissemination of information to your contractor-dealer is a matter we have found to be of considerable importance. Printed material in most cases tells only a part of the story. A personal call by a sales engineer can do more to cement your relations than any other single thing.

The sales engineer's call can advise your contractors of the equipment your company recommends and the installation practices supported by you. Our company has a system of inspection that calls for a sales survey and a complete inspection of conversion burner installations before it is approved by us. This, many of you will say would be impossible for you to undertake because of the scattered districts you service, and because of the expense involved. However, we have found an ounce of prevention to be worth a pound of cure, and if a poor installation is made on your lines, service trouble develops which will surely cause you to make these calls sooner or later.

Adequate records are kept by us from which we are able to get any information which might be required in an analysis of contractors work or customer difficulty. The quality of the equipment and the service required of each individual manufacturer's equipment taken from these records are invaluable.

Testing

We have, as you know, been testing space heating equipment since the early 30's. We are not publishing our requirements on conversion burners, but use the following screening process before test. Manufacturers requesting test are asked to submit the following information:

A. All engineering data available.
B. All design data, photographs, etc.
C. What kind of controls are standard equipment?
D. Do you intend to stock parts in this area? What service will you offer?
E. The latest American Gas Association listing certificate and information showing exactly what control arrangement was used in A.G.A. testing.
F. What plan of merchandising will you follow? In other words, to whom do you intend to sell this equipment?

From this data we are able to accept or reject equipment for test. If we require major changes in equipment this must be done and made standard practice by a manufacturer on his production line before his conversion burner is accepted for testing purposes in our Laboratory.

In this screening process many burners fall by the wayside and many manufacturers do not care to make any changes. After testing their equipment on many critical points if the burner is approved, our heating contractors and our own people are notified of this approval. We do not recommend any conversion burner which we have not tested, and reserve the right to shut off any heating installation installed on our lines which in our judgment is unsafe.

Considerable publicity was given this procedure and many installations have been shut off, which invariably has resulted in the customer having a proper installation made. For instance if manufacturer A requested a test on his conversion burner and after advising him of what changes would be necessary before our accepting this equipment for test he refused to make these changes and attempted to sell his burner in our territory, we would received an inquiry from our customer or heating contractor, as to whether or not we had approved this equipment. Our answer was "No," invariably his next question is "Why?" Our answer, "Because we have not tested this equipment." His next question is, "Why have you not tested this equipment?" Our answer, "The manufacturer of this particular equipment has not made the changes recommended by us." "What are these changes?" This information we will not divulge to customers or heating contractors, but we advise them to ask the manufacturer involved why their equipment has not been tested. The next logical question by these people is, "Will you serve gas to any conversion burner even though you have not tested it in your Laboratory?" Our answer, "If this burner installation in our judgment is unsafe at the time of our inspection we reserve the right to discontinue gas service."

From time to time certain heating associations in our territory publish their own installation requirements on conversion burners and capitalize on the fact that their entire membership follows the Gas Company's recommendations. This data is available to those of you who desire it, and can be obtained from the Heating, Piping and Air Conditioning Contractors' Association, Chicago Chapter, 228 N. La Salle Street, Chicago, Illinois. Much of the material contained in this manual is of course usable at the local level only, however, the fundamentals of conversion practices we believe to be on a national basis.

The Next Step

The next step in the solution to the conversion burner problem must be the up-grading and re-writing by the American Gas Association of their testing and listing requirements. How this is to be achieved is best answerable by the Association itself. However, any new listing or upgrading of this particular device will not be effective unless it is possible to recall for test all the equipment now listed. Only then can the good be separated from the bad. Only then could legitimate manufacturers have a competitive chance in the price war that is to come. We by no means believe that the American Gas Association can by itself through any method of testing or listing appliances control or protect your customer from poor conversion burner installations. Too long have we taken the path of least resistance. Their contribution as mentioned heretofore can aid materially, but a well rounded program is necessary before good results can be obtained.

Summation

In summation to our solution to this problem, the following we believe are essential:

1. Full management support of overall policy, in that they are willing to make their company's recommendation known to all concerned.
2. The delegation of responsibility and authority to the proper persons to carry on this work.
3. A sales engineering staff to properly train installers, to inspect their work and compile the necessary heating data.
4. A firm testing policy whereby a screening process eliminates undesirables before testing.
5. The keeping of necessary service records so that in supplementing recommendations a further basis for decisions are justified.
6. The refusal by your company to serve gas to an installation which in its judgment is unsafe.

A fair question at this point might be, "What have we accomplished by this method of operation." Of all the conversion burner sales in the City of Chicago in 1946, 94% of these sales were of equipment which our company had tested and approved. The 94% was participated in by eight manufacturers.

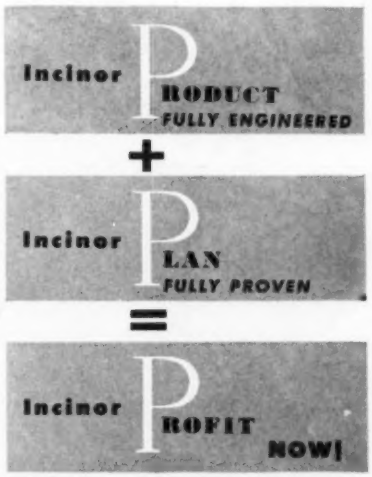
The remaining 6% proved to the installing contractor, the manufacturer and ourselves that our program was sound in that the expense involved in making these installations safe was such that they were soon of the opinion that it would be much better for all concerned if the manufacturer would have his equipment changed and tested to meet our requirements before any installations were made in our territory. Let us not think that we can take from the gas business just what we want. Gas heating for most of us has become the glamour girl of our business and within full protection in the conversion burner field she will become a blowsy wanton, unloved and undesired old wretch.

Presented at Eastern Regional Sales Conference of American Gas Association, Pittsburgh, February 13, 1947.

Chemical Books: Chemical Publishing Co., Inc., 26 Court Street, Brooklyn 2, N. Y. has issued their new 1947 catalog. The catalog includes books on chemistry, technology, physics, general science, mathematics, engineering, foods, formularies, drugs and cosmetics, medicine, metals, technical dictionaries, etc., as well as college and other textbooks. Copy on request.

New Gas Appliance Merchandising Brochure

Product, Plan and Profit is the title of a comprehensive new brochure recently released by the Incineration Division of Bowser, Inc., manufacturers of gas-fired Incinor.



Available to gas companies, dealers, and distributors, this interesting booklet tells in a concise manner the story of the product, the merchandising plan behind it, and points out the profit opportunities which the residential incinerator market offers. A copy may be obtained by writing to Bowser, Inc., 647 W. Virginia Street, Milwaukee 4, Wisconsin.

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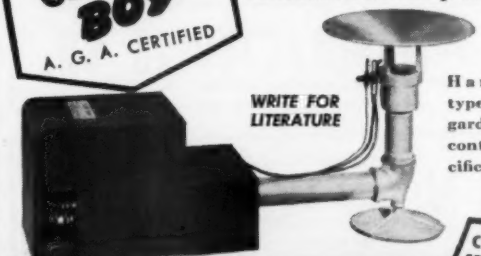

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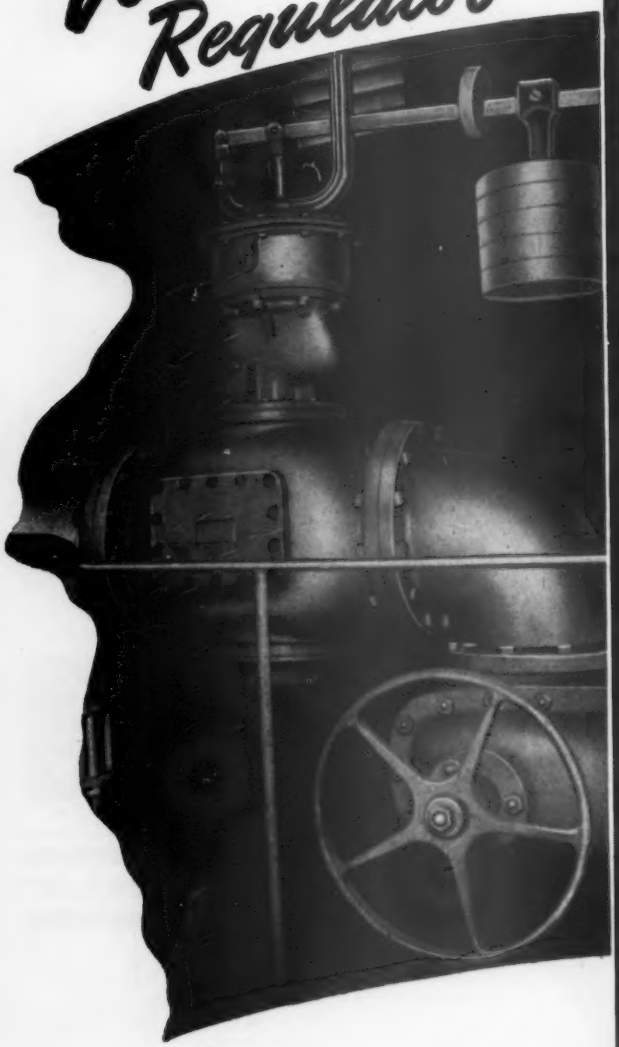

★ Reynolds KT Series Versatile Regulator is manufactured in a range of sizes from 2″ to 12″. It will reduce pressure to inches W. C.—or pounds to pounds. This Regulator can be used where space is limited, making it impossible to use the auxiliary bowl. In addition, Reynolds builds High Pressure Line Regulators with auxiliary bowl, when complete lockup is required. Let Reynolds adapt their new Versatile Regulator to your Gas Control System.

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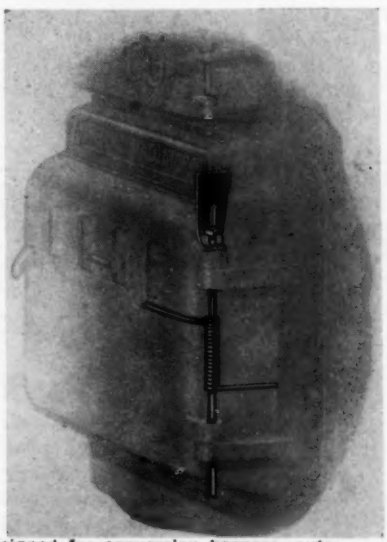

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RECENT COURT DECISIONS *Affecting Gas Utilities*

Law Suits Involving Injuries to Employes

By
Leo T. Parker
Attorney at Law
Cincinnati, Ohio

RECENTLY the higher courts in different localities have rendered outstanding decisions involving the right of injured gas employes to recover compensation under the State Workmen's Compensation Act. Many of these decisions have reversed the older law. In other instances new law was decided. We shall briefly review these most important higher court decisions.

Must Follow Law

All states have laws requiring gas companies to perform certain duties, such as filing specific reports with the states, giving information of the number of their regular employes, the duties of such employes, wages earned by employes, and to contribute to a fund set aside for compulsory payment of compensation to injured employes.

All employers should carefully comply with these statutes, since failure to do so may result in greatly *increased* liability. This is true because the courts have consistently held that an employer, who fails to comply with Workmen's Compensation Laws, not only is subjected to payment of heavy penalties but, also, automatically becomes liable in damages for all injuries sustained by employes.

An important legal distinction is that under the common law an employer is not liable in damages for injuries sustained by an employe, as a result of the employe's own negligence. But if the employer violates the State Workmen's Compensation Act he is liable.

For illustration, in Holton v. Clayco Gas Company, 154 S. E. 637, it was shown that a workman was hired by a gas company to lay a gas pipe line. He filed suit against the gas company for injuries sustained when he tripped over a plainly visible wire. In other words, the employe's negligence resulted in the injury. However, in this case the employe introduced testimony showing that the employer had failed to abide by certain provisions of the state compensation laws. In view of this evidence the court held the gas company liable, and said:

"When an employer comes within the purview of the Workmen's Compensation and is not protected by it, and a suit is brought against him for an injury occurring to one of his workmen, received in the course of his employment and arising out of it, he (employer) cannot interpose as a defense assumption of risks, or negligence and carelessness on the part of the workman, where the employer has been negligent himself, and from which negligence the injury resulted."

Employe May Sue Under Common Law

Frequently, injured employes may prefer to sue for damages under the common law, rather than accept the amount of compensation fixed by Workmen's Compensation Laws. This circumstance may exist where the employe believes that a jury will allow a verdict for damages for an amount greater than the compensation authorized by the state's compensation laws. Therefore, it is important to know that an employe who "elects" to file suit under the common law is barred from relying upon the Workmen's Compensation Laws to obtain positive payment, should the suit terminate adversely for him, and vice versa.

Under no circumstances, however, can an injured employe maintain a suit against an employer for damages if the employer has conformed with the State Workmen's Compensation Act, and the injury did not result from an unlawful act of the employer.

Also, it is well established law that under common law a gas company is not liable in damages for injuries to employes not resulting from negligence of the company but the employe may recover compensation under the State Workmen's Compensation Act. And again an employe is not entitled to damages, under the common law, where an injury is a direct result of negligence of a fellow workman. But a gas company always is responsible in damages for injuries sustained by any employe as a result of negligence of a superior, as a foreman.

For instance, in Natural Gas & Fuel Corporation v. Alotto, 11 S. W. (2d) 769, it was disclosed that an employe was seriously injured by an automobile while he was standing in a ditch making meter connections with the main gas line.

The employe brought suit against the gas company to recover damages for the injury and proved that the foreman was negligent by inducing him to go in the ditch, and tighten up the connections, promising to stand there and keep watch for the traffic, but he failed to do so.

In view of this testimony, the court held the employe entitled to recover for the injuries sustained, stating important law to the jury, as follows:

"If you find from a preponderance of the evidence that the plaintiff (employe) was in the employ of the gas company and was working for it under the orders and instructions of its foreman, and you find from the evidence that he was injured on account of the negligence of the gas company, its agents, servants, or employes, it will be your duty and you are told to find for the plaintiff (employe)."

Must Arise from Employment

As above explained an employe is *not* entitled to damages, under the

common law, nor to the compensation specified by the Workmen's Compensation Laws, unless the injury arises from the scope of the employment.

Very often, persons confuse the terms "within the scope of the employment" and "in the service of the employer." However, it is established that an employe who is injured "while serving his employer," may not be "acting within the scope of the employment" when the injury is sustained, but the employe is entitled to compensation when the act resulting in the injury is *intended* to benefit the employer. The employe always is entitled to damages for an injury sustained, *as a result of the negligence* of his employer, while working within the scope of the employment, where he is not protected by the State Workmen's Compensation Act.

The law is well settled that an injury arises out of an employment, for which the employe is entitled to compensation, when it occurs in the course of the employment and is the result of a risk involved in the employment or incident to it. However, in every case there must be *apparent* some casual connection between the injury and the employment, or the conditions under which it is required to be performed, before the injury can be found to arise out of the employment for which the employer is liable.

In other words, an accident arises "in the course of the employment" if it occurs while the employe is doing what he may reasonably be expected to do during the hours of his employment, and at a place where he may have good reason to be during that time. Moreover, an injury arises "out of" the employment when the risk resulting in the injury may have been contemplated by a reasonably prudent employer.

For example, in the recent case of Schockley v. Morristown Company, 11 S. W. (2d) 900, the court explained the law on this subject, as follows:

"An employe while at work for his employer may do those things which are necessary to his own health and comfort, even though they are personal to himself, and such acts will be considered incidental to his employment. And while recognizing, as we do, the general rule that an employe cannot be awarded compensation when he has turned aside from his employment for his own purposes, there are many departures by an employe which do not deprive him of compensation, for examples, in seeking toilet facilities, in preparing for the street, in quenching his thirst, in eating a lunch, in seeking fresh air, in seeking shelter from a storm, in protecting himself from cold, or even in saving his personal belongings from injury."

On the other hand, see Thomas v. Peerless Company, 62 F. Supp. 154, where it was shown that certain employes contended that their hour off at noon for lunch should be paid for as overtime, at one and one half. The employes contended that their services *may be* required during lunch hours to cut off gas supply to save the company expenses. Every unexpected shut-down presents an immediate emergency to get all gas cut off, otherwise the company is threatened with the danger of a big replacement job throughout the plant. Therefore, it is of vital necessity that every man who comes to work in the plant be specially instructed as to this ever present potential danger, and how to cope with it. The plant runs twenty-four hours a day. All employes, as starters, are warned of this danger, and how to take care of it, regardless of shifts, day or night.

But the higher court refused to hold that the employes were "em-

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ployed" during lunch hour. This court said:

"The plant experience here would not have justified keeping their regular men to remain on the premises during the lunch hours to possibly cut off gas."

Law of Independent Contractors

Generally speaking, gas companies are not required to pay such taxes as Social Security, State Workmen's Compensation, Unemployment, and the like, on an "independent contractor." Moreover, the company is not liable in damages for injuries to persons or property caused by an independent contractor. Neither is the company liable in damages or for payment of compensation to an independent contractor killed or injured while performing his work.

On the other hand, no company may avoid these legal consequences by obscurity of contracts which merely on their "face" convert legal employes into independent contractors.

For example, in Your Company v. United States, 57 Fed. Supp. 830, it was shown that a company entered into written contracts with certain employes by the terms of which the employes agreed to act as independent contractors. The higher court held that the employes were not independent contractors.

On the other hand, see Commercial Motor v. Ebright, 54 N. E. (2d) 297, where it was shown that the owner of a motor truck was under contract to furnish his own truck, including its gas and maintenance. The truck owner was compensated according to the amount of service rendered, and the amount of compensation was determined either by the mileage covered or the tonnage hauled. He was instructed by the employer when and where to make deliveries. He could use any route and employ anyone to assist him.

The higher court held that this employe is a legal independent contractor.

Gas Leaks

Considerable discussion has arisen from time to time over the legal question: When is a municipality, or gas company, liable in damages for injuries to employes, persons and property resulting from gas leaks? The answer is: Only when the injuries were caused by negligence of the city gas officials, or employes.

For illustration, in Smith v. City of Richmond, 34 S. E. (2d) 371, it was shown that at 7:13 A.M. a tenant in a small apartment building notified the city gas department that gas was leaking into the building. The city, in response to this notice sent an employe in the Department of Public Utilities to the building. He reached it at 7:30 and went into different apartments and in one apartment he found a Mrs. Smith unconscious, called the rescue squad, and administered artificial respiration until that squad arrived. She was taken to a hospital and has recovered, but sued the city for damages.

In holding the city not liable, the higher court said:

"Injuries which plaintiff (Mrs. Smith) has suffered are ample to sustain a recovery, but that is not enough. It must be made to appear as a proximate cause that the city has done something which it ought not have done or has left undone something which it should have done."

Injuries Caused by Negligence

Although company officials and employes are required to exercise a high degree of care to prevent escape of gas from company pipes, yet the company is not liable in damage for injuries caused by gas, either to employes or consumers, who are contributory negligent, or act outside the scope of the gas company's control and ownership of the pipes or appliances which may explode.

For illustration, in Doxstater v. Northwest Cities Gas Company, 154 Pac (2d) 498, it was shown that an employe attempted with a lighted match to ignite a gas water heater, which had a defective valve. A terrific explosion followed, resulting in great damage to the employe, the building and its occupants.

Suit was filed against the gas company, and the lower court held the company liable. However, the higher court reversed this verdict because the testimony proved that the gas company did not own nor control the heater or connecting pipes, and also the employe knew that the valve on the water heater was defective, and he failed to report the defective condition of the water heater to the gas company.

James F. Lincoln Arc Welding Foundation $200,000 Award Program

To those in the gas industry interested in the $200,000 Design-for-Progress Award Program, conducted by The James F. Lincoln Arc Welding Foundation, Cleveland, O., the program ends June 1st. All papers must be in by that date.

Here are some suggested steps for all participants that are often overlooked. These comprise a vital link in the success or failure of your paper, so heed them closely.

First, familiarize yourself with the rules. Read them carefully, several times is advisable. Secondly, determine the category —which of the 15 classifications—that your material falls under. The last suggested step is to do justice to the material you have in preparation, for a thorough job can spell the difference between a winning and non-winning paper.

If you have lost or mislaid your rules, write for another copy.

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Steel Plate Construction

A. G. A. at the Heating and Ventilating Exposition

The American Gas Association had one of the outstanding exhibits at the 7th International Heating and Ventilating Exposition held in the Public Auditorium, Cleveland, January 27 to 31. In two exhibit areas, with over 2200 square feet of space, 42 manufacturers of all-year air conditioning units, winter air conditioning furnaces, other types of gas-fired furnaces, boilers, water heaters, a floor furnace and a space heater exhibited their products to over 30,000 visitors at the Exposition.

The A.G.A. booths were done in the traditional blue and white, and the symbolic mechanical gas flame was in evidence to serve as a beacon for the gas industry exhibits. That the exposition was an outstanding success was evidenced by the continual flow of visitors through the two gas exhibit areas and the hundreds of requests received for A.G.A. publications on subjects pertaining to gas heating in the fields covered by the exposition.

The participating manufacturers in the A.G.A. combined exhibit were:

American District Steam Co., North Tonawanda, N. Y.;
American Furnace Co., St. Louis, Mo.
Armstrong Products Corp., Huntington, W. Va.;
American Radiator & Standard Sanitary, Pittsburgh, Pa.;
Ira E. Baker Co., Cleveland, Ohio;
B. G. B. Manufacturing Co., Dearborn, Mich.;
Bryant Heater Co., Cleveland, Ohio;
Certified Furnace Co., St. Paul, Minn.;
Chrysler Corp., Airtem Division, Dayton, Ohio;
Coleman Co., Inc., Wichita 1, Kansas;
Columbia Burner Co., Toledo, Ohio;
Coroaire Heater Corp., Cleveland, Ohio;
Empire Stove Co., Belleville, Ill.;
The Farquhar Furnace Co., Wilmington, Ohio;
Floral City Heater Co., Monroe, Mich.;
Forest City Foundries Co., Cleveland, O.;
Fraser & Johnston Co., San Francisco, Cal.;
Handley Brown Heater Co., Jackson, Mich.
Hook & Ackerman, Inc., New York, N. Y.;
Lennox Furnace Co., Marshalltown, Ia.;
Ernest C. Lundt, Inc., Montclair, N. J.;
Mayflower Air-Conditioners, Inc., St. Paul, Minn.;
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.;
Morrison Steel Products, Buffalo, N. Y.;
L. J. Mueller Furnace Co., Milwaukee, Wisc.;
Mustee Heater Co., Cleveland, O.;
Norman Products Co., Columbus, O.;
C. A. Olsen Mfg. Co., Henry Furnace Co., Elyria, O.;
Perfection Stove Co., Cleveland, O.;
Rheem Manufacturing Co., New York, N. Y.;
Richmond Radiator Co., New York, N. Y.;
Riverside Products Co., Wheeling, W. Va.;
Roberts-Gordon Appliance Corp., Buffalo, N. Y.;
Rybolt Heater Co., Ashland, O.;
Servel, Inc., Evansville, Ind.;
Supreme Gas Burner Mfg. Co., Detroit, Mich.;
The Century Heating & Ventilating Co., Akron, O.;
U. S. Stove, Pittsburgh, Tenn.
Waterman-Waterbury Co., Minneapolis, Minn.;
White Rodgers Electric Co., St. Louis, Mo.;
H. P. Products Co., Akron, Ohio.

Two sections of the A.G.A. combined exhibit showed controls, conversion burners and other gas-fired appliances.

All manner of gas-fired equipment for heating, ventilating and air conditioning was exhibited through the cooperation of manufacturers at the A.G.A. combined exhibit.

Midwest Personnel Executives Meet

The 12th meeting of the A.G.A. Midwest Personnel Conference, the first under the chairmanship of D. L. Sedgwick, Superintendent of Gas Operations, The Kansas Power & Light Company, held at the Phillips Hotel, Kansas City, Missouri, February 6, was devoted largely to the reporting and discussion of the policies of the companies represented. The treatment of each subject uncovered varied experience from which significant conclusions might be drawn. For instance, the policies reported on sick leave indicated that the less definite policies were the more liberal, and no significant amount of abuse of any sick leave policy was encountered. Under present changing labor conditions, a meeting such as was held by the A.G.A. Midwest Conference undoubtedly helps the companies represented to crystallize policy action based on actual experience.

The A.G.A. Midwest Personnel Practice Conference will meet again in May and September and will hold a combined meeting with the A.G.A. Southwest Personnel Conference in November, definite time and places to be announced later. All gas companies in the following states are invited to send representatives to the meetings of the Midwest group: Arkansas, Colorado, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, South Dakota and Wyoming

A. G. A. Activities

Industrial Gas School

The A.G.A. Industrial Gas School, sponsored by the Industrial and Commercial Gas Section, American Gas Association, will be held the week of May 5 to 9, 1947, at the Hotel Seneca, Columbus, Ohio.

The purpose of the school is to provide intensive training for the men who sell or promote the use of gas for the diversified heating operations in industry. New equipment and new techniques that were stimulated by war production have been adapted for peace-time use in many fields, thus advancing the progress of gas utilization and increasing the opportunity to expand industrial gas sales.

The five-day course will provide instruction in the utilization and sale of industrial gas covering practically all the applications and problems that may confront the industrial gas man in his daily rounds of industrial gas users and prospective users. A complete outline of the course of study follows:

The faculty of the A.G.A. Industrial Gas School is made up of leaders in their respective fields in member gas companies, specialists in various phases of the applications of industrial gas from the manufacturers of industrial gas equipment, a professor from Ohio State University, and one from Western Reserve University.

Commercial Gas School

As a companion project, the Industrial and Commercial Gas Section, American Gas Association will sponsor the A.G.A. Commercial Gas School which will be held the week of May 12 to 16, 1947 in Washington, D. C. Most of the sessions will be held in the auditorium of the Washington Gas Light Company, and on two afternoons and one evening they will be held at the Lewis Hotel Training School.

The objective of the school is to assist gas companies in securing more commercial sales by providing intensive training for men devoting all or part of their time in selling or promoting the use of commercial gas. Changes have been made in old commercial gas equipment and new equipment has been developed. It is therefore necessary that gas men be familiar with this new equipment and changes that have taken place, and they must know how to select and arrange equipment to obtain the best results for their customers.

The five day program will provide instruction in the full scope of commercial gas utilization in the volume food service field. The faculty for this Commercial Gas School are men who have a comprehensive knowledge based on wide experience in commercial work. The men who attend this school will receive a good foundation on which to build a successful sales record. New men especially need this training course to be able to secure commercial gas loads in a highly competitive market.

Gas Publicity Objectives Set

Publicity objectives for 1947 were set at a meeting of the Publicity and Advertising Committee of the American Gas Association which was held January 28 in New York. Under the chairmanship of E. M. Tharp, vice president and general manager, Ohio Fuel Gas Co., Columbus, all activities of the recently-organized Publicity Bureau were canvassed and plans made to strengthen this activity.

It was disclosed at the meeting that activities have been organized to cover four fields: (1) general and financial, (2) domestic uses of gas, (3) Association and industry, and (4) industrial and commercial. Each of these fields will be covered by a fulltime A.G.A. staff member who will be responsible for results in his field.

Considerable discussion centered on coordination of the publicity and promotional efforts of the A.G.A., its member companies and the members of the Gas Appliance Manufacturers Association. The need for additional publicity to support the industry's enlarged sales promotion and research program was stressed.

A new development reported at the meeting was the enrollment of 135 field correspondents to stimulate the flow of gas industry news to and from A.G.A. headquarters.

Strengthened Conversion Burner Standards

Recommendations for strengthening present requirements for conversion burners in line with technical studies and field reports were formulated at a meeting of the supervising committee, held at the A.G.A. Laboratories on January 15 and 16.

Consideration of additions to present listing requirements initiated at the previous meeting was continued and general agreement reached on principal features. Major discussion centered around formulation of more stringent pilot performance tests. Much attention was also given to testing of conversion burners in gas furnaces in addition to boilers. Remaining details will be reviewed at a meeting already scheduled for February 18 and 19. It is expected that revised standards will then be adopted for presentation to the Approval Requirements Committee for approval at its March meeting so that testing of conversion burners under these strengthened requirements may be undertaken immediately.

Requirements for installation of conversion burners will also be reviewed following completion of revision of the listing standards. As the initial step, copies of procedures now in use will be secured and analyzed for later committee consideration.

Meeting of the Publicity and Advertising Committee of the American Gas Association in New York, January 28, at which 1947 publicity objectives were set. Left to right, seated: J. M. Beall, A.G.A.; R. G. Barnett, Portland (Oregon) Gas and Coke Co.; R. E. Gros, Pacific Gas and Electric Co., San Francisco; G. A. McDonald, A.G.A.; E. M. Tharp, Ohio Fuel Gas Co., Columbus, Chairman; Otto Mauthe, Southern California Gas Co., Los Angeles; and J. H. White, Jr., A.G.A. Standing: M. A. Combs, A.G.A.; W. B. Hewson, The Brooklyn Union Gas Co.; G. A. Higgins, Boston Consolidated Gas Co.; and H. W. Given, Equitable Gas Co., Pittsburgh.

Gas Men to Meet at Boston

"Industry and the Atom" will be the subject of a talk by Dr. George R. Harrison, Dean of Science, Massachusetts Institute of Technology, at the Tuesday luncheon of the A.G.A. Sales Conference on Industrial and Commercial Gas, American Gas Association, to be held at the Copley-Plaza Hotel, Boston, March 17, 18 and 19. In these days when control of atomic energy is the number one international topic, every one attending the three day conference will want to hear what this eminent scientist has to say about atomic power and what it will mean to the gas industry.

The first day's sessions on March 17 will be devoted to topics on commercial gas which will be presented by authorities in the gas business, and also men outside of the gas industry. Among those speakers on subjects allied with volume cooking and public feeding will be Colonel Paul P. Logan, National Restaurant Association and William Broeg, Food Consultant, San Francisco and Boston.

On Tuesday, March 18, the subjects discussed will be of interest to both industrial and commercial gas men. The subjects will be presented by leaders in their respective fields.

Distribution and Motor Vehicle Conference in April

Plans for the Distribution and Motor Vehicle Conference, sponsored by the Technical Section of the American Gas Association, were discussed January 13 in New York at a meeting of the two committees in charge of the conference. The conference will take place April 14-16 in the Hotel Cleveland, Cleveland, Ohio. J. H. Collins of New Orleans, is chairman of the Distribution Committee, and B. D. Connor of Boston, chairman of the Motor Vehicle Committee.

The tentative program calls for general sessions, including both distribution and motor vehicle subjects, on Monday and Wednesday mornings. Three round-table luncheon meetings will be held Monday afternoon divided as follows: Meters and Metering, Corrosion, and Motor Vehicle Developments. An inspection and demonstration at the A.G.A. Laboratories in connection with the work of the Subcommittee on Work on Consumers' Premises has been arranged for the same afternoon.

Tuesday has been set aside for three all-day conferences devoted to (1) Construction and Maintenance combined with Distribution Design and Development, (2) Motor Vehicle Operation, and (3) Work on Consumers' Premises. Reports of subcommittee and an open forum will conclude the program on Wednesday afternoon.

Among the distribution topics on the tentative schedule are: Conserving Sendouts in Emergency and Restoring Gas Service in Major Outages; Economics of High and Low Pressure Distribution Systems; Operating, Installation and Maintenance Practices Dealing with Gas Service Piping; General Service Policies; Heat Induction in Meter Stripping Operations.

The motor vehicle committee will sponsor topics on the use of automotive equipment in distribution activities, including driver training, and will present a subcommittee report on truck body design.

Koch Appointed Assistant Supervisor

Appointment of Charles E. Koch as Assistant Supervisor of the Pacific Coast Branch of the American Gas Association Testing Laboratories has been announced by R. M. Conner, Director.

At the same time Mr. Conner announced that Alfred A. Jacquot, Chief Inspector at the Los Angeles branch, had resigned to become affiliated with the Detroit Brass & Malleable Works as a sales engineer.

A. A. Jacquot Charles E. Koch

Mr. Koch returns to the Laboratories staff after five years of broad experience in the gas appliance field, having been associated with the General Water Heater Corporation of Burbank, California, as Assistant Chief Engineer since 1941. He was in charge of process and quality control in the plating department, tooling operation planning, machine design for plant production, research on domestic water supply, and corrosion of water heater tanks. During the war Mr. Koch handled tool design and plant layout, supervised production and also headed the inspection department of the corporation's war activities.

Mr. Jacquot, who completed nearly ten years of service with the Laboratories, is returning to Los Angeles after visiting the home office of his company in Detroit. He will be available to gas appliance manufacturers on the Pacific Coast for discussion and assistance in engineering problems and the development of new ideas in the application of his company's products to gas appliances.

New Building Completed at Los Angeles

More than 2,000 square feet of additional floor space have been provided for testing operations at the Pacific Coast Branch of the American Gas Association Testing Laboratories with the completion of a large Quonset structure directly adjoining the present building.

The new structure, which provides a floor area of 40 by 52 feet, is now in use for shipping and storage of gas appliances awaiting test. It releases a similar amount of space formerly used for the purpose in the main building, thus making available additional testing facilities for manufacturers of gas equipment.

Rockwell Manufacturing Company Makes Three New Appointments

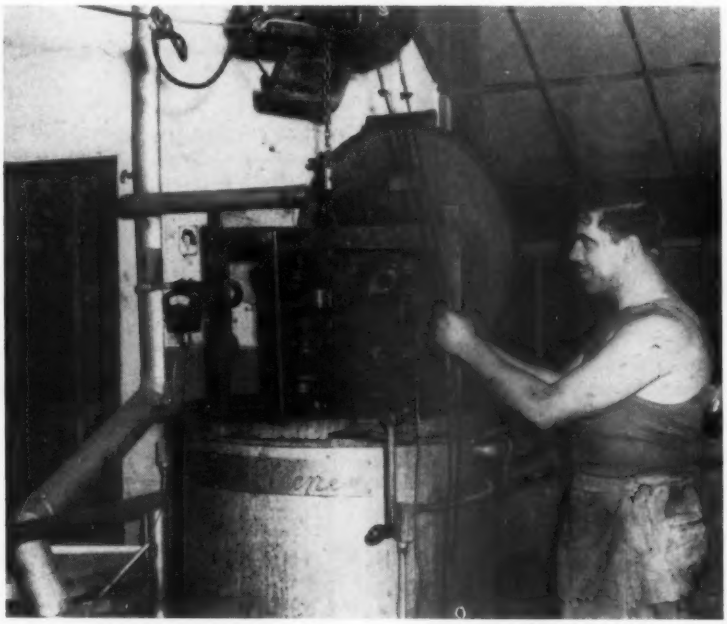
Three appointments to the executive staff of the Rockwell Manufacturing Company, Pittsburgh, have been announced by W. F. Rockwell, Jr., Vice President and General Manager.

C. A. Wiken, for the past eight years chief engineer of the Delta Manufacturing Division in Milwaukee, has been promoted to the position of Vice President in Charge of Engineering for the Rockwell Manufacturing Company. He will coordinate the engineering activities of the various divisions and subsidiaries, supervise the standardization of engineering procedures and materials, and administer company-wide policies relating to engineering.

J. E. Ashman has been named Controller of the Rockwell Manufacturing Company. He comes to the Rockwell organization after four years with United States Steel as Director of Procedure for Carnegie-Illinois Steel Corp., 13 years as National Enterprise representative for the Burroughs Adding Machine Co., and a further background of corporate financial, sales and management consulting experience.

A. E. McIntyre, who for the past several years has been manager of the Nordstrom Valve Division plant in Oakland, California, has been transferred to Pittsburgh as General Manager of the Company's Pittsburgh Equitable Meter Division. Mr. McIntyre came to the Nordstrom Valve Division after 17 years with the Caterpillar Tractor Co. plant near Oakland, where he was factory manager. He will continue to serve as manager of the Nordstrom Valve Division.

Auto Laundry—New Style



Lowering a motor block into the washer, after which the lid is clamped down and the water turned on. The high pressure spray strikes all sides of the block and thoroughly cleans it in a matter of minutes. B & H Service Company, Worcester, Massachusetts.

IN THESE DAYS when it is still necessary to keep the old car running because new automobiles are slow coming through, an enterprising service station in Worcester, Mass., set up an automobile engine washing department as part of their business. From the start, the B & H Service Company's motor laundry has been an outstanding success. They not only wash engines as a part of their own business, but also wash them under contract for dealer branches in Worcester and the surrounding territory.

No small part of the success of this enterprise can be attributed to the washing facilities that use gas fuel for heating. The operation is a comparatively simple one. Engine blocks are stripped of all moving parts and just washed. Hot water and a grease solvent does the job. In this plant a 450 gallon tank contains the cleaning solution which is heated to 180° F. by means of thermostatically controlled gas-fired immersion burners using 600 cu. ft. of manufactured gas per hour. The 180° F. cleansing solution is delivered to the washer through a centrifugal pump at 115 p.s.i. pressure at the rate of 200 gallons per minute, returning through filters to the tank for reheating. It is this high pressure spray directed against the engine block in the washer that thoroughly cleans it. Blocks are cleaned in from 2 to 8 minutes depending on the grease incrustation, the average time being 5 minutes.

Other motor parts, pistons, cranks, valves, and carburetor parts are cleaned by the same method, the parts being placed in baskets which are placed in the washer.

Through the use of gas-fired equipment, and the one washer, 600 engine blocks and their component parts can be cleaned each month. Every piece comes from the washer as bright and as clean as it did new. No damage is caused by this process as the high temperature water heats the parts and blocks and they dry very quickly before rust can form.

Rheem Takes Over Fraser Furnace Co.

Rheem Manufacturing Co. has completed arrangements for the purchase of the entire gas furnace and appliance business of Fraser Furnace Co., including patents, designs, trade name, inventories and certain manufacturing equipment.

The company plans to manufacture the Fraser line at Fraser Furnace Co.'s plant at Stockton, Calif., under a lease arrangement. It will also manufacture the Fraser line at the Rheem heating equipment plant in Chicago.

Our Standard Inspection Report tells the actual condition—inside and out—of each gas holder examined. It gives you the *hidden facts* on where serious corrosion trouble may be brewing in your holders. It points out misalignments — their cause and best corrective measures. In short—it will save you money on your gas holder investment. Let us give you the facts.

The STACEY MANUFACTURING Co.
SINCE 1851
CINCINNATI 16, OHIO
GAS HOLDERS • HI-PRESSURE TANKS • PURIFIER BOXES
ENGINEERS • FABRICATORS • CONSTRUCTORS
An Independent Organization Not Affiliated With Any Other Builders of Gas Holders

Eastern Natural Gas Regional Sales Conference

MORE than 400 gas industry sales executives convened at Roosevelt Hotel, Pittsburgh, Pa., on February 13 and 14 to participate in the first Eastern Natural Gas Regional Sales Conference held in five years. The conference, which was sponsored by the Residential Gas Section of the American Gas Association, was action-packed from the welcoming address delivered by F. B. Jones, Manager of Sales and Market Research, Equitable Gas Company and Chairman, Eastern Natural Gas Regional Sales Council, at 10:00 A. M. on February 13, to the Valentine Party tendered to the guests by 31 members of the Gas Appliance Manufacturers Association after the conference had been adjourned at 4:00 P. M. on February 14.

R. H. Hargrove, Vice-President and General Manager, United Gas Pipe Line Company, and President, American Gas Association, delivered the keynote address, "Industry Problems and Roads to Progress". He called for aggressive sales promotion and expressed the opinion that the gas industry is on the threshold of its greatest opportunity for advancement.

W. J. Schmidt, General Sales Manager, Long Island Lighting Company, and Chairman, A. G. A. Water Heating Committe, presented a dramatic picture of sales possibilities for both utility and appliance companies offered through the new concepts of hot water requirements for automatic washing machines, automatic dish washers and for family use.

Gas house heating is one of the major considerations in the minds of gas industry executives today and Raymond Little, General Sales Manager, Equitable Gas Company, Pittsburgh, and Chairman, A. G. A. House Heating and Air Conditioning Committee, reported to the conference on the studies made by his committee in this all-important field of gas utilization.

Pointing out that most of the consumer preference surveys made recently to determine market potentials showed that from 40 per cent to 65 per cent of prospective new home builders desired gas for heating, Mr. Little stressed the necessity for the gas industry to develop a heating load that is sound economically.

There are at least 70 manufacturers of conversion burners in the market today as compared with four or five before the war, Mr. Little said. Many of these burners will be discontinued when straight gas-fired equipment is again readily available. Therefore, consideration should be given to who is selling and installing these burners.

Steps are being taken to upgrade heating equipment and a program will soon be recommended to the industry for educating the consumer, the heating trade, the architect and builder in respect to the necessity for maintaining high grade standards for house heating with gas.

Irving K. Peck, Vice-President, Manufacturers Light & Heat Company, Pittsburgh, presided at the afternoon session of Thursday, with W. H. Wise, Manager of Sales Engineering, The Peoples Gas Light & Coke Company as the opening speaker. Mr. Wise presented the solution his company had found for controlling installations of gas-fired equipment on its mains. This paper will be found in this issue of the Journal.

Market research and low cost sales and their relationship to the gas industry were discussed by Lyman Hill, Director, Sales Research, Servel, Inc. Pointing to the work of the Post-War Planning Committee of the American Gas Association as an outstanding example of market research, Mr. Hill demonstrated how studies of this nature could be incorporated into sales programs. Because of changing trends in population and buying habits, he advocated frequent studies be made along these lines.

W. B. Hewson, Publicity and Advertising Manager, The Brooklyn Union Gas Company, and a member of the A. G. A. National Advertising Committee, presented the Association's 1947 advertising program which will bring three hundred million advertising messages on domestic, industrial and commercial uses of gas to the American public in leading consumer, trade and engineering college publications this year. Mr. Hewson advocated tie-in advertising by utility companies in order to capitalize on the impact of these messages and asked the support of the industry in further expanding the advertising efforts in the coming years.

Expressing the belief that the national trend is changing from a sellers' to a buyers' market right now, George T. Stevens, Executive Vice-President, Eureka Williams Corporation, declared that just as production plants had found it necessary to retool for peacetime manufacturing, sales organizations should be retooled to meet today's needs. Advertising themes, basic sales training and promotional plans must be changed to keep pace with tomorrow's demands, he said. Programs that were profitable before the war or even in the early days of reconversion, now may prove obsolete.

Franklin T. Rainey, general sales manager, The Ohio Fuel Gas Company, presided at the morning session Friday. E. Carl Sorby, Vice-President, George D. Roper Corporation, and Chairman of the CP Range Committee, eloquently told the conferees what the gas industry was doing and would do to meet the automatic cooking challenge with gas. In forceful and convincing language, Mr. Sorby pictured the potential cooking market for the gas industry executives. Emphasizing the demand for modernity in cooking appliances that today's consumers are evidencing, Mr. Sorby graphically showed what the modern gas range, particularly the CP model, offers as an answer to this challenge.

The important part played by Home Service Departments in the sale of gas appliances through participation in the New Freedom Gas Kitchen Program, on gas utility sales floors and in the homes of consumers was ably presented by Katherine Barnes, Home Service Director, Equitable Gas Company. Helen Kirtland, Home Service Director, The Ohio Fuel Gas Company, told of the work home service is doing in cooperation with schools and colleges. Flora Dowler, Home Service Director, Manufacturers Light & Heat Company, arranged the home Service participation in the program, and described some of the activities of Home Service workers in civic and scholastic fields.

The story of the 1947 gas refrigerator was presented in a most interesting manner by A. D. Howard, Assistant Sales Promotion Manager of

(Concluded on page 58)

Federal Power Commission

Applications for Extensions and Services

United Fuel Gas Company and the Ohio Fuel Gas Company

The United Fuel Gas Company and The Ohio Fuel Gas Company have requested authority from the Federal Power Commission to construct a 100-mile, 20-inch gas transmission line extending from a tap on the pipeline of Tennessee Gas and Transmission Company near Ceredo, West Virginia, to Ohio Fuel's Crawford compressor station in Fairfield County, Ohio. Upon completion of the line and other facilities required, the companies state they would be able to deliver an additional 51,000,000 cubic feet of gas a day to the Crawford Station to meet increased demands of Ohio Fuel's present markets. Construction costs to both companies have been estimated at $4,398,620.

The portion of the line extending from Tennessee Gas and Transmission's Ceredo tap to Burlington, Ohio would be constructed by United. Ohio Fuel would construct the Ohio portion of the line and also install two 600-HP compressor units in its South Point compressor station, through which the line would be routed. After completion of the entire project, the Lick compressor station and about 191 miles of smaller line between the South Point and Crawford Compressor Stations would be abandoned.

United Fuel and Ohio Fuel are both subsidiaries of Columbia Gas & Electric Corporation.

Columbia Gas & Electric Corp.

Columbia Gas & Electric Corporation's Charleston and Pittsburgh Groups have filed with the Federal Power Commisison applications for authority to construct additional facilities to supply estimated increased requirements in existing markets served by the Columbia companies, including Washington Gas Light Company, The Manufacturers Light and Heat Company and Home Gas Company. Total cost of the proposed facilities has been estimated by the companies at $25,492,040.

Plans include construction by Atlantic Seaboard Corporation and Virginia Gas Transmission Corporation, members of the Charleston Group, of a 268-mile, 24-inch line from United Fuel Gas Company's Cobb, West Virginia Compressor Station to a connection with the existing main line system of the two companies near Rockville, Maryland and construction by The Manufacturers Light and Heat Company and Home Gas Company of a 130-mile, 14-inch line from a junction of the main line of Manufacturers at Coatesville, Pennsylvania to Port Jervis, N. Y. This line would extend through Eastern Pennsylvania to a point of connection with the eastern portion of Home Gas Company's transmission system.

In addition, Atlantic proposes construction of a new 3,200-HP compressor station on its main line in the vicinity of Flat Top, West Virginia, a Potomac River crossing and installation of measuring and regulating equipment. Virginia Transmission would install two additional 800-HP compressor units at its Bickers Compressor Station in Albemarle County, Virginia.

Other proposals of the Pittsburgh Group include the installation by Manufacturers of compressors aggregating 3,174 HP, the purchase of 10½ miles of 8-inch transmission line in Ohio from Natural Gas Company of West Virginia, construction of 1,400 feet of 12-inch transmission line in Washington County, Pennsylvania, and Marshall County, West Virginia connecting the Majorville Compressor Station and United Fuel's Cedarville line, the purchase of 7,300 feet of the Cedarville line from United Fuel and construction of 3.2 miles of 20-inch line near Groveton, Pennsylvania, connecting a 20-inch line with a 16-inch line. The Natural Gas Company of West Virginia would install an aggregate of 1,000 HP in Ohio compressor stations.

Memphis Natural Gas Co.

The Memphis Natural Gas Company, Memphis, Tennessee, has filed with the Federal Power Commission an application requesting authority to construct and operate a 1016-mile, 24-inch line extending from the East Texas gas fields to a point in Green County, Pennsylvania, about 25 miles south of Pittsburgh. Construction would cover a three-year period, the initial stage of construction reaching the vicinity of Louisville, Kentucky; the second to Clarington, Ohio, and the third to the vicinity of Pittsburgh. Total cost has been estimated at $63,300,000.

A second application, filed jointly by Memphis Natural and Kentucky Natural Gas Corporation, requests authority for the Memphis company to acquire and operate the natural gas properties of Kentucky Natural, and for Kentucky to make the sale. Purchase consideration, as stated in the application, is $4,957,488, to be paid in stocks and bonds of Memphis. The two applications are not interdependent.

Mississippi River Fuel Corp.

The Mississippi River Fuel Corporation has applied to the Federal Power Commission for authority to construct and operate additions to its pipe line system to increase delivery capacity 83,000,000 cubic feet of gas per day by the winter of 1948-49. Cost of construction has been estimated at $10,200,000 and would be financed by issuance of common stock and by bank loans.

The gas made available through the proposed additional facilities would be used by Mississippi River Fuel to meet the increased demands of its existing customers including both utility customers who buy gas for resale and industrial customers who buy gas for their own use. The application stated that the gas requirements of utility customers continue to show unprecedented increases, primarily due to greater use for house heating, and new demands have made it necessary for the company to curtail industrial gas deliveries.

Expansion Program of Public Service Corporation of New Jersey

Construction budgets for 1947, totaling more than $34,000,000, have been authorized by the subsidiary operating companies of Public Service Corporation of New Jersey for new equipment, extensions and replacements, President George H. Blake has announced. This is in addition to $23,000,000 previously appropriated for the new Sewaren Electric Generating Station and also is in addition to $6,000,000 appropriated earlier in 1946 for gas works equipment and distribution mains.

Of the total amount in the 1947 construction budgets, approximately $23,900,000 is for the Electric Department and $7,900,000 for the Gas Department of Public Service Electric and Gas Company; $1,700,000 for Public Service Coordinated Transport and Public Service Interstate Transportation Company; and $800,000 for Atlantic City Gas Company, Peoples Gas Company and County Gas Company.

Highest Bid for "Inch" Pipe Lines Made by Texas Eastern Transmission Co.

TEXAS Eastern Transmission Co., of Houston, Tex., bid $143 million for the Big and Little Big Inch pipe lines, which was the highest offer when bids were opened by WAA on Feb. 10, and appeared likely to be the successful bidder.

Texas Eastern is a corporation formed in Delaware in January, 1947. The officers are E. Holley Poe, New York, president; George R. Brown, Houston, chairman; Charles I. Francis, Houston, vice president and general counsel; Herbert J. Frenzley, Houston, secretary treasurer, and Hilding Carlson, New York, assistant secretary and assistant treasurer.

In a report from Houston, Texas, Charles I. Francis, vice president, indicated that Texas Eastern Transmission Co. is considering extending the Big Inch and Little Big Inch pipe lines to carry Texas natural gas directly into New England, if the company's bid for the lines is accepted.

The contemplated extension would cut into present lines in New Jersey west of existing terminals at Linden; would then probably go north to a crossing over the Hudson River well above New York City, and would then run east to a terminus at or near Boston.

Laterals from this proposed line would provide service to distributing utilities in Connecticut, Rhode Island, Massachusetts and southern New Hampshire as far north as Concord.

"Of 26 utility companies contacted in New England, 24 have expressed an interest in buying natural gas from us for delivery to ultimate consumers," Mr. Francis said.

He estimated the cost of the New England extension "in the neighborhood of $40 million." It is reported that one reason for considering a New England extension is the fact that direct entry of natural gas pipe lines into New York City from Linden, across the river, would involve substantial time and expense in acquiring rights of way, as well as in construction. Mr. Francis views development of New England as a natural gas market as a logical alternative which would not exclude service to New York City, as soon as it is feasible.

George R. Brown of Houston, chairman of the board of the new company, and his brother, Herman Brown, a director, said they hoped to take over operation by May 1.

Most of the supply of gas to fill the lines will come from Texas and Louisiana fields, they said.

The transmission company hopes to make a deal with United Gas Corporation to use all the feeder lines under its control now supplying the lines, the board chairman revealed. The lines are now being operated by the Tennessee Gas and Transmission Company under lease.

The Texas Transmission Company will not control final use or distribution of the gas in the Eastern States. It will act as a wholesaler, with other firms distributing and selling to consumers, Mr. Brown explained. Most of the gas will probably go to home users, he said.

"We don't anticipate any serious opposition to taking the gas through Pennsylvania," he stated. He referred to objections arising last December when the Government first granted permission to transport gas through the lines.

The pipe line is now operated by the Tennessee Gas and Transmission Co. on a temporary lease, expiring on May 1st, 1947.

The Texas company expects to spend $40,000,000 to convert the pipe lines into regular gas carriers. When the conversion is completed, the company hopes to move about 425,000,000 cubic feet of gas to the east coast daily.

A number of legal steps must be taken before the successful bidder may actually secure possession of and operate the two lines. The Attorney General of the United States must first issue an opinion that acceptance of the bid will not contribute to a monopoly. All major bidders received legal advice that the facts would warrant the Attorney General to issue such an opinion. Texas Eastern believes that no difficulty will be met in qualifying as a "responsible bidder."

After a "no monopoly" opinion is rendered and a bid is accepted, a letter of intent will be issued in a week or ten days, embodying detailed provisions of a contract for transfer of the properties. At that time, $1 million of the purchase price must be paid. A certified check for $100,000 accompanied each of the valid bids.

The temporary lease of the lines to Tennessee Gas & Transmission Co. will expire April 30, and at that time the successful bidder would receive a "letter of entry" from the government, permitting possession, and another $4 million of the sale price would then have to be paid.

After the letter of entry, another nine months would be allowed the bidder to clear up right-of-way difficulties. The entire balance of the purchase price is due on or before expiration of the nine months period. It might therefore be as late as Jan. 31, 1948, before a buyer of the lines would be required to complete purchase payments.

Action must be taken by the FPC. Within 60 days after a letter of intent is issued, an application must be filed with the commission for a certificate of public convenience and necessity to transport and sell natural gas in interstate commerce. This application and certificate, mandatory for all pipe lines doing a business of this character, will then be followed by public hearings, at which witnesses for both applicants and objectors may testify.

The first pipe of the line was put underground on April 27, 1943, and six weeks less than a year later, on March 2, 1944, the stream of gasoline of the line arrived at the Linden, N. J., terminal. The Little Big Inch or products line, which cost $67,300,000, has 20-inch pipe for its full length of 1,475 miles from Texas City and Beaumont, Texas, to the New York Harbor area. In its construction, 278,815 tons of steel were used for the line and 14,800 tons for the storage tanks. The Little Big Inch line has 197 valves. The number of oil pumping stations required for the operation of the Little Big Inch was 32, with 100 pumps utilizing 1,824,000 kilowatts of electric power per day. The smaller line required 47 storage tanks with a capacity of 2,884,000 barrels. Through August 31, 1945, the Little Big Inch delivered 105,960,000 barrels of oil, its annual capacity delivery being 85,775,000 barrels.

The War Assets Administration announced February 25th that the Justice Department has approved the sale of the Lines to Texas Eastern Transmission Corp.

New Equipment and Appliances

Sprague Zephyr Meter

This aluminum case meter is now offered the gas industry following the design and sizes of the Sprague iron case meter.

"Zephyr" Meter

All parts are interchangeable with older models to assure dependable service. Available in sizes 1A to 5A. Weight as compared with cast iron models is less than half. Uniformity and strength is brought about by the method of casting the case in metal dies to produce fine-grained well knit castings of dimensional uniformity. Weight of the 1A meter is but 13 pounds.

Range "Lyter"

This device is simple in construction, noticeably free from small parts and linkages, with particular attention devoted to eliminating any possibility of overloading the thermostatic element. It is adaptable to three types of ignition — cycling flash tube ignition, cycling gas ignition and cycling electric hot wire ignition. Gas range users will find the cycling flash tube ignition advantageous, since this type does not require an extra constant burning pilot or electric current to control the flow of gas. The Range Lyter (patented), is small and compact and can be installed completely in the burner compartment.

The device has many excellent safety features. The valve of the lighter is opened and shut every time the oven or broiler is operated. This constant use prevents the valve from sticking. Should the oven or broiler pilot, which burn only when these burners are lighted, go out, the gas flowing to these burners is automatically shut off. Gas can flow to the main burners only when there is a flame to ignite the gas.

It is estimated that contingent upon normal supplies of materials and labor, more than 200,000 Range Lyters will be installed in cooking ranges in 1947. It is being manufactured by Bryant Heater Co., 1020 London Road, Cleveland 10, Ohio. Fully described in Bryant bulletin 372.

The following manufacturers plan to install them on 1947 gas ranges: American Stove Company, Cribben & Sexton Company, Glenwood Range Company, Hardwick Stove Company, Geo. D. Roper Corporation and Tappen Stove Company.

Horizontal Earth-Boring Tool

A new horizontal earth-boring tool, light enough to be operated by one man, is announced by the Hydrauger Corporation, Ltd. of San Francisco. Expressly developed for service pipe leads, it is reported to be consistently straight-boring for underground distances up to 50 feet. Power is provided by a 3.2 horsepower motor, operated by 90 pounds of air pressure. The pilot bit hole of 2-inch diameter can be opened up by reaming to 3½ and 4½ inches. For added handling ease, boring bar sections are 2 feet in length and weigh but 5 pounds each. The new model joins a family of larger Hydraugers that have been used by utilities for years, particularly for installing pipe under pavement, landscape, buildings, etc.

Hydrauger Model LHH-2

For further information write the company at 116 New Montgomery St., San Francisco.

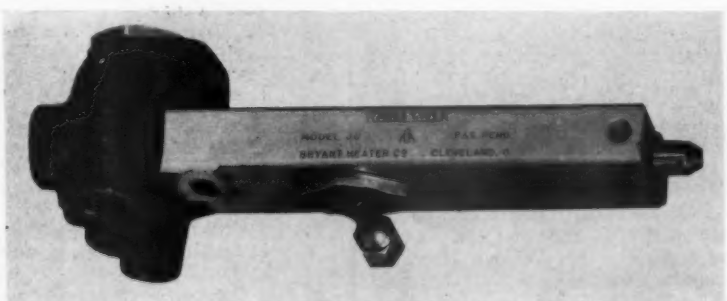
Adsorption Fractionator

This unit provides a means of separating, identifying, measuring and collecting the components of light hydrocarbon gas mixtures and recording the analytical data. The analysis is graphically presented in curve form.

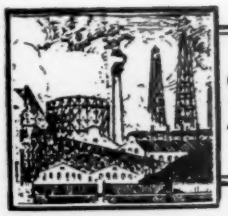
The operating technique is simple and unskilled personnel may be readily trained to follow standardized procedures. The equipment will automatically follow a preselected program permitting the operator to be absent from the laboratory during the major portion of the analysis. The automatic controls are positive.

The apparatus is a self-contained unit 78 inches high, 42 inches wide and 21 inches deep, weighing 500 pounds. There are no accessory assemblies and no refrigerants are required. A single electric connection only is needed.

Full description in Bulletin 205 of Burrell Technical Supply Co., 1940 Fifth Ave., Pittsburgh 19, Pa.



Range Lyter



News of the Gas Industry

Annual Meeting Southern Gas Association

The Annual Meeting of the Southern Gas Association will be held April 17 and 18 at Biloxi, Miss. The Buena Vista Hotel has been designated as headquarters.

M. H. North, General Convention Committee Chairman, and his Committee are working diligently to provide an outstanding program.

General sessions will be held at the Buena Vista Victory Room on the mornings of April 17 and 18. Subjects to be included on the general sessions are: Future Outlook for Management and Labor, Production Trends for 1947-48, Appraisal of Our Industry's Opportunities, The A. G. A. Program for 1947-48, Your Association Looks to the Future.

Sectional meetings will be held on the afternoons of April 17 and 18 and will be under the direction of the chairman of each of the sectional committees.

There will be sales section meetings, operation section meetings, industrial and commercial section meetings, and the home service committee will conduct an all day "work shop."

Hotel reservations for individuals may be obtained by writing directly to the Buena Vista Hotel at Biloxi, Mississippi. Reservations made by member companies, including both gas and manufacturer-distributor members, may be made by writing to the Managing Director of the Association at 1230 Mercantile Bank Building, Dallas 1, Texas.

Southwestern Gas Measurement Short Course Planned

Program plans for the Twenty-Second Annual Southwestern Gas Measurement Short Course to be held at the University of Oklahoma, May 6, 7, and 8, 1947, were drawn up at a recent meeting of the General Committee.

Approximately 60 subjects covering gas measurement and regulation and related work will be covered in classes and general assembly meetings during this year's three-day session, the Committee announced.

The Course is sponsored annually by the University of Oklahoma College of Engineering; the Oklahoma Corporation Commission; Kansas Corporation Commission; Arkansas Oil and Gas Commission; Oklahoma Utilities Association; American Gas Association, Natural Gas Section; the Natural Gasoline Association of America; and the Southern Gas Association.

Twenty-four states, as well as Canada and Russia, were represented in the enrollment of 787 for last year's meeting. The Course has as its aim to provide the various Associations and Commissions, and the Gas, Gasoline and Oil Companies, a means of getting together to study problems of measurement and regulation of dry and casinghead gas.

Proceedings of last year's Course have been received by Dean Carson, and will be mailed to all who attended. Additional copies are available at a cost of $1.75 from Dean Carson, University of Oklahoma.

Southern Counties Gas Co. Holds Annual Sales Dinner

The Southern Counties Gas Company of Los Angeles held its annual sales dinner meeting on the night of January 24 when 103 officers, directors, executives and members of the new business staff gathered in the Rodger Young Auditorium, Los Angeles, to commemorate the year's sales achievements.

Principal speakers were Franklin S. Wade, president of the company, who acted as host; Judge Frank G. Swain, of the Los Angeles County Superior Court; and Norman R. McKee, vice president of the company.

President Wade complimented the members of the organization for their sales efforts during the year 1946 and predicted continued growth of the company's meters in 1947. He reported that active meters on the Southern Counties Gas Company's system as of January 1, 1947, totaled 255,000.

Sales of all appliances by the company, including ranges, refrigerators, water heaters, heating equipment and miscellaneous items, reached a grand total of $1,287,168 in 1946, the second highest in the company's history, according to Mr. Wade. The all-time high figure was $1,324,141, attained in 1941.

Clyde H. Potter, manager of appliance sales, acted as toastmaster and introduced the following guests and officials:

A. F. Bridge, vice president and general manager of Southern Counties Gas Co., past president of the American Gas Association and recently named chairman of the managing committee of the American Gas Association Testing Laboratories; Joseph Sodoma, assistant secretary; G. E. Steller, secretary; M. R. Thompson, retired vice president; Fred A. Hough, executive engineer; G. W. Wadsworth, Jr., vice president; R. A. Hornby, vice president, Pacific Lighting Corp.; W. J. McCoy, treasurer and controller; C. A. Miller, Pacific Coast Manager, Servel, Inc.; J. C. Gilbert, division manager of the company's Santa Monica properties; Fred C. Champion, retired assistant treasurer; Frank C. Packer, assistant to the president, Payne Furnace & Supply Co.; William Henderson, Southern California Gas Co.; Thomas H. Hall, Pacific Coast representative, George D. Roper Corp.; and Ross Munro, James Graham Mfg. Co.

CONVENTION CALENDAR

March

11 *G.A.M.A.* Gas Water Heater Division, Hotel Muehlebach, Kansas City, Mo.

17-18 *Residential Gas Section, Midwest Gas Sales Conference,* Edgewater Beach Hotel, Chicago.

17-19 *A.G.A. Sales Conference on Industrial & Commercial Gas* Copley Plaza Hotel, Boston.

20-21 *New England Gas Association,* Annual Meeting, Boston, Mass.

24 *G.A.M.A.* Hotel, Restaurant and Commercial Gas Equipment Division, Stevens Hotel, Chicago.

April

7-9 *Mid-West Gas Association Conference,* Hotel Statler, Buffalo.

7-9 *Mid-West Gas Association* Annual Meeting, Hotel Paxton, Omaha.

14-16 *Distribution and Motor Vehicle Conference,* Hotel Cleveland.

14-16 *G. A. M. A. Annual Meeting,* Drake Hotel, Chicago.

16-18 *Southern Gas Association,* Biloxi, Miss.

25-26 *Gas Meters Association of Florida-Georgia,* Boca Raton, Florida.

30-May 1 *A. G. A. Natural Gas Department,* Annual Meeting, Stevens Hotel, Chicago.

May

15-16 *Indiana Gas Association,* French Lick Springs Hotel, French Lick.

20-22 *Pennsylvania Gas Association,* Wernersville, Pa.

June

2-4 *Joint Production and Chemical Committee Conference,* Hotel New Yorker, N. Y.

9-11 *Canadian Gas Association,* General Brock Hotel, Niagara Falls, Ontario.

23-24 *Residential Gas Section,* New York-New Jersey Sales Conference, Essex and Sussex Hotel, Spring Lake, N. J.

July

7-8 *Michigan Gas Ass'n,* Grand Hotel, Mackinac Island, Michigan.

September

23-25 *Pacific Coast Gas Association,* Hotel Del Coronado, San Diego, Cal.

29-Oct. 3 *American Gas Association,* Annual Convention, San Francisco.

Campbell Retires at Pasadena Succeeded by M. G. Thomas

Southern California Gas Company of Los Angeles has announced the retirement, effective February 1, of George S. Campbell as district manager of the firm's Pasadena District after 43 years of service. He has been succeeded as district manager by Myron G. Thomas, who has served as assistant district manager for some time.

George S. Campbell

A native of Lynn, Mich., Campbell came to Pasadena in 1903, where he completed his high school and business college education. Immediately upon finishing school he started work for the gas company, where he was employed in various capacities before becoming Pasadena district manager in 1932.

Campbell is well known throughout the Pasadena area because of his active participation in civic affairs. He has served as president of the Tournament of Roses Association which annually on New Year's Day sponsors the world-famous Tournament of Roses and the Rose Bowl football game. He has served also as president of the Optimist Club, Pasadena Shrine Club, United Service Club, treasurer of the Pasadena Chamber of Commerce, and chairman of the board of Salvation Army. He is a member of Corona Lodge No. 324, F. & A. M., and the Scottish Rite of Pasadena, and Al Malaikah Shrine of Los Angeles.

A.G.A. Suggests Amendments to Constitution and By-Laws

Important amendments to the constitution and by-laws of the American Gas Association were approved unanimously at the January 29 meeting of the Executive Board and have been submitted to members for voting by mail prior to April 1. These provide for:

Myron G. Thomas

(1) Enlarging the Executive Board by nine members, including the chairman of the A.G.A. Laboratories' Managing Committee;

(2) Setting up an Executive Committee to act for the Executive Board between meetings, thus providing greater expediency and flexibility in the conduct of Association activities; and

(3) Making possible a more practical method of approving and paying bills.

Enlargement of the Executive Board is proposed in order to make it more representative of the Association's membership. If the amendments are adopted, one-half of the additional eight members and the chairman of the Laboratories' Managing Committee are expected to take office after the 1947 Annual Meeting and the remaining four new members would take office after the 1948 Annual Meeting.

It takes a two-thirds majority vote of members to amend the constitution and by-laws.

Michigan Consolidated to Spend 12 Million for Expansion

Michigan Consolidated Gas Co. will spend approximately $12,000,000 in 1947 to expand and improve its facilities.

A gas production plant will be built at an estimated cost of $2,000,000, while about $8,000,000 will be spent for new mains, services and domestic expansion in the Detroit area, and about $2,000,000 for expanded facilities in the Grand Rapids, Muskegon, Ludington, Mt. Pleasant, Greenville-Belding and Big Rapids areas, Mr. Fink said.

Announcement of the building program was made in conjunction with release of the company's annual report for 1946, which showed total net income, after all charges, of $3,462,716, compared with $2,904,986 in 1945.

Taxpayers Approve Denver Franchise Renewal

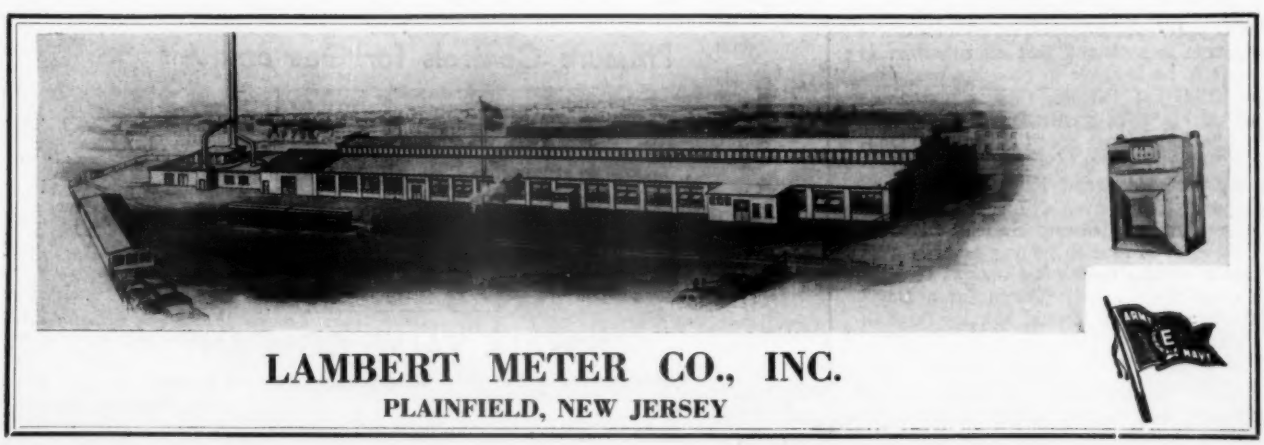
Approval by Denver taxpayers of a new 20-year franchise for the Public Service Company of Colorado at a special election Feb. 11 calls for immediate construction of a $12,000,000 natural gas pipeline to Denver by the Colorado Interstate Gas Company. The vote was nine to one in favor of the franchise.

The pipeline, to be built between Denver and either the Hugoton Field in Kansas or the Amarillo Field in Texas, is planned for completion in time for the winter's heating requirements.

Another estimated $12,000,000 is to be spent for additional facilities on the pipeline system when necessary to meet gas requirements. In addition, Public Service Company will be required to spend about $10,000,000 during the next five years for enlargement of its gas distribution system in Denver.

The new facilities will provide ultimate delivery of 215 million cubic feet of gas per day to Denver, as compared with 83 million cubic feet available with present equipment.

Approximately half of all Denver residences now are using gas for heating. The company estimates that when sufficient natural gas becomes available through construction of the second pipeline, 40,000 homes will install gas heating equipment.



L. P. Gas Standby Plant at Detroit to Increase Capacity

A further increase in standby facilities for the storage and use of liquefied petroleum gas is in prospect for Detroit gas users with the announcement by Stacey-Dresser Engineering, Cleveland, a division of Stacey Bros. Gas Construction Company; that it has been awarded a contract by the Michigan-Consolidated Gas Company to handle engineering and erection details of the new installation.

The original plant built last year by Stacey-Dresser engineers provided an additional 20,000,000 cubic feet of gas per day during the recent cold spell. The new facilities, to be provided at a cost of something over $1,000,000, will step up this capacity by another 30,000,000 or 40,000,000 cubic feet per day.

When completed, the old and new installations together will consist of ninety-six 30,000-gallon tanks and constitute the world's largest storage plant for liquefied petroleum gas serving the gas industry, according to E. A. Flaschar, General Manager of Stacey-Dresser Engineering.

Builders Iron Foundry Name Geo. W. Kelsey Vice Pres.

George W. Kelsey, a director and general sales manager of Builders Iron Foundry, Providence, R. I., for the past several years, has been named a vice president of that concern, President Henry S. Chafee announced, following the February meeting of the Board of Directors. Mr. Kelsey is also identified with three Builders Iron Foundry subsidiaries. He is vice president and general sales manager of Builders-Providence, Inc. (manufacturers of flow measurement and control instruments), secretary of Omega Machine Company, manufacturers of volumetric and gravimetric chemical feeders, both of Providence, and vice president of Builders-Pacific, Inc., distributors, of Berkeley and Huntington Park, Calif.

Servel Radio Programs

Although Servel, Inc., is now participating in four network radio shows, recently compiled figures show that the total number of refrigerators given away in a year's time is less than an hour's production at the factory in Evansville, Ind.

R. J. Canniff, Servel advertising and sales promotion manager, in releasing these figures, pointed out that every effort is made to be selective in choosing programs with highest listener ratings and those which will be of greatest mutual benefit.

The four shows are: "Hollywood Jackpot," aired coast to coast over CBS Monday, Wednesday and Friday; "Bride and Groom," heard over 210 stations of the American Broadcasting System; "Heart's Desire," a Mutual sustaining program carried by approximately 304 stations Monday through Friday, and "Queen for a Day," also broadcast by Mutual Monday through Friday.

Refrigerators are given away every three or four weeks on the "Jackpot" show and one refrigerator a week on the other programs

American Meter Appoints Benson Production Mgr.

American Meter Company announces the appointment of Mr. Arthur F. Benson to the position of Production Manager of the company and its subsidiaries, effective January 1, 1947. Mr. Benson, who has been with American Meter Company since 1930, will also continue in his position as Chief Engineer, to which he was appointed January 1, 1943. Mr. Benson has had wide experience in the development of displacement and orifice measurement of gases and liquids, as well as pressure and volume control.

Arthur F. Benson

Simultaneously, the company has announced the appointment of Mr. William G. Hamilton, Jr., as Sales Manager of the company and its subsidiaries, also effective January 1. Mr. Hamilton joined American Meter Company December 1, 1927. He became Assistant Manager of the Philadelphia factory in June, 1941, and was placed in charge of War Production during which time two "E" awards were won for the outstanding performance records of this plant. On September 27, 1945, he was appointed manager of the Philadelphia operations. He has had extensive experience in the engineering and sales activities of the company.

Boston Gas Celebrates Second Year On Air

The Boston Consolidated Gas Co. celebrated its second anniversary on the air on January 29th with the popular "Quizzing The Wives" program.

In honor of the occasion The Boston Gas Co. provided refreshments for the studio audience following the broadcast. Several Yankee Network personalities including Louise Morgan, who appears on the Tello-Test program in addition to her own morning show, Fred Lang, also of Tello-Test fame, Cedric Foster, noted Mutual Yankee news analyst, Ben Hadfield, New England's best known announcer, and Charles Forester, Yankee's "Answer Man," spoke to the audience saluting the occasion.

John J. Quinn, Sales Manager of the Boston Consolidated Gas Co., welcomed the radio audience to celebration.

Contestants on this anniversary broadcast were members of The Beth Club of Winter Hill, Somerville, whose members appeared on the first "Quiz" show just two years ago. The opposing team consisted of members of The Commonwealth Chapter No. 1016, Veterans of Foreign Wars Auxiliary, who appeared last year on the first anniversary broadcast, as well as this, the second anniversary.

Tritton Reappointed Chairman Excise Tax Committee

Bruce R. Tritton, vice president of American Stove Company, Cleveland, Ohio, has been reappointed chairman of the excise tax committee of Institute of Cooking and Heating Appliance Manufacturers, according to an Institute announcement.

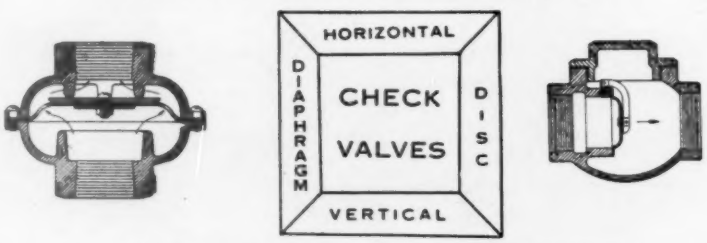
Mr. Tritton's committee is charged with the responsibility of showing the unfairness of an excise tax on such a completely essential household item as a cooking range.

Pacific Gas Corporation in New Quarters

Executive offices of Pacific Gas Corporation are now located at 345 Madison Avenue, New York 17.

Former quarters at 630 Fifth Ave. will be retained for the Export and Transportation Divisions of the Company.

Pressure Controls for Gas and Air



NORWALK VALVE COMPANY

Manufacturers of Connelly Governors, Valves and Gauges

33 Railroad Ave. South Norwalk, Conn.

Ruud's Increased Facilities

The recent establishment of new plants has given the Ruud Manufacturing Company, makers of gas water heaters, the largest production potential in the organization's 57-year old history, it is announced by R. H. Lewis, Ruud president. Overall production capacity will be 400% greater than that of pre-war years.

Ruud Plants 1 and 2 at Kalamazoo

In addition to existing facilities in Kalamazoo, Mich., Toronto, Ont., and Pittsburgh, Pa., two new factories, one in Kalamazoo and one in Santa Cruz, Calif., were but recently completed and equipped. This will give the Ruud company the world's largest manufacturing network solely devoted to the manufacture of gas water heaters.

Manager of both Kalamazoo plants is P. O. Minor. Halvard Lintvedt, engineering and metallurgical specialist on Monel metal, is general superintendent. A. J. Strain, former superintendent of domestic sales for the Consumer's Gas Company, Toronto, Ont., is in charge of the Toronto-Ruud factory, while H. O. Metz is factory superintendent at Santa Cruz.

Bowser Inc. Appoints District Managers for Incinor

Appointment of Edward M. Brody as District Manager for the Indiana-Kentucky-Tennessee-Mississippi area has been announced by M. A. Naulin, Sales Manager of the Incineration Division of Bowser, Inc., manufacturers of gas-fired Incinor. Also the appointment of H. W. Dodge for the New England and Eastern States area, George H. Hand for the Ohio-Michigan and western Pennsylvania area, and J. T. Prout for the Middle-West area. The national sales and advertising offices of Incinor are located at Milwaukee.

Cooper-Bessemer Announces Promotion of Horace Sanders

The promotion of Horace Sanders to Assistant Southwestern District Manager for The Cooper-Bessemer Corporation, effective **January** 1, was announced recently by Stanley E. Johnson, Vice President and Director of Sales.

Mr. Sanders, who has been associated with Cooper-Bessemer for nearly twenty years, is well known throughout the Southwest territory, having been active in engine and compressor sales and engineering for the past thirteen years.

In his new capacity, Mr. Sanders will assist Mr. A. A. Burrell, Southwestern District Manager, in the administration of Cooper-Bessemer sales and service in that area.

An Unusual Utility Advertisement

Unusual advertising was recently used by the B. C. Electric Railway Co. at Vancouver, taking the form of a four page supplement to Vancouver newspapers, and was entirely of the editorial type.

The first page showed an early view of Greater Vancouver. The copy was addressed "to 85,000 new neighbors," and the body of the copy pointed out that these new neighbors who had settled in the metropolitan area of Vancouver during the past six years, had undoubtedly experienced inconvenience due to lack of transportation, gas shortages and lack of electrical connections. The copy then went on to explain the handicaps experienced by the public utility companies, and announced that the Company had now started its fifty million dollar postwar plant, and that by the end of this year, twenty-two millions of this amount would have actually been expended in development. This particular page concluded in specially large type, "This will be the payoff year."

The second and third pages were devoted to photographic presentations of progress on the Bridge River power plant being developed by the company and work in progress on the $650,000 underground installation now being made by the Company.

The concluding page of the advertising matter was devoted to progress on the $850,000 gas plant under construction for the Company, and work on the laying of 58 miles of new gas mains. Here again maps and editorial material completed the presentation.

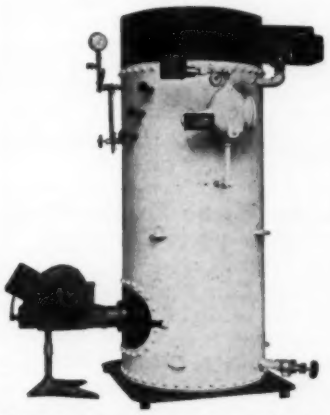
Rust in Water Heating Tanks

Based on the principle of prevention rather than that of removal of rust in water heating tanks is the function of the "Elno" protector, a device furnished by The Cleveland Heater Co., Cleveland 14.

This protector is rodlike in shape, made of a special alloy in one inch or ⅞ in. diameter and equipped with a special fitting which serves as the hot water outlet; the tank, protector and hot water line forming one rigid assembly. Rust prevention is derived through electrochemical action.

Particularly adaptable for use on new or old galvanized steel tanks of standard range boilers or automatic storage water heaters. Bulletin with complete details are available.

LATTNER
GAS — OIL BOILER
3 HP to 35 HP.



Burns natural gas or regular furnace oils with equal efficiency using same burner.

P. M. Lattner Mfg. Company
Cedar Rapids, Iowa

GOODMAN
USED SINCE 1897
"Z" HANDLE & LOCKING SLEEVE
GAS MAIN STOPPER

The Reliable Shut-Off for Street Mains

THE GOODMAN STOPPER

Now has the "Z" handle for easy manipulation. When locked in place it holds. Stopper cannot slip. Gas cannot pass. Adjusted in 30 seconds.

Ask for circulars on this and other distribution equipment.

Nearly a half century of service to the Gas Industry.

Safety Gas Main Stopper Co.
523 Atlantic Avenue, Brooklyn, New York

ASME Proposed Revision of Section VIII

A previous announcement has already been made by the Boiler Code Committee of The American Society of Mechanical Engineers that its Special Committee to Revise Section VIII of the ASME Boiler Construction Code (Unfired Pressure Vessel Code) has submitted in draft form the Proposed Revision of Section VIII of the Code, dated January, 1947.

The Boiler Code Committee has made arrangements to hold two public hearings in the Southwest on the proposed revision. The first of these hearings will be held in Houston, Texas, at the Rice Hotel, on May 1st at 8:00 p.m. and on May 2nd at 9:30 a.m. The second hearing will be held in Los Angeles, California, at the Biltmore Hotel, on May 7th at 9:30 a.m. The purpose of these hearings is to give all those interested in the Code, such as pressure vessel manufacturers, users, and state enforcement authorities, an opportunity to express verbally their comments on the proposed revision.

The Boiler Code Committee is particularly desirous of attracting to these meetings all users of the ASME Unfired Pressure Vessel Code, such as pressure vessel manufacturers and users, representatives from the petroleum and gas industries, state officials, and any others who have an interest in the Code.

For those interested in reviewing the proposed revision, copies are obtainable from the ASME at 29 West 39th Street, New York 18, N. Y., at $1.00 per copy. All those interested are invited to submit their comments in writing to the Secretary of the Boiler Code Committee, whether or not they are able to attend one of these hearings.

Bryant Heater Co. Establishes Graduate Fellowship

The Bryant Heater Company has established a graduate fellowship for study at Case School of Applied Science, Cleveland, Ohio, according to an announcement by Dr. Elmer Hutchisson, Dean of the Graduate Division.

This fellowship is open to graduates with the degree of Bachelor of Science in Mechanical Engineering from accredited colleges or universities who satisfy the requirements for admission to the Graduate Division of Case School of Applied Science. It is expected that the fellow's thesis will be concerned with gaseous fuels or some other fundamental problem of interest to the gas industry.

The fellowship carries with it a stipend of $1,850 from which the tuition of $500 must be paid. The remainder will be paid to the student at the rate of $150 per month. The Bryant Heater Company has offered to employ the selected candidate at the prevailing salary for the summer months preceding the fall term in which he begins study.

Applicants for the Bryant Heater Company Fellowship in Gaseous Fuels should file applications by April 1. Necessary forms may be obtained from the Dean of the Graduate Division, Case School of Applied Science, Cleveland 6, Ohio, who will also furnish information regarding prerequisites and courses of study.

Nielsen & Fryer Represent Hammel-Dahl in Chicago

Hammel-Dahl Company of Providence, R. I., manufacturers of automatic control equipment, announces the appointment of Nielsen & Fryer, Inc., 142 East Superior Street, Chicago 11, Ill., as their representative in the Chicago area. Mr. Nielsen was formerly associated with the Foxboro Company and Mr. Fryer with the electrical engineering department of Schweitzer & Conrad and later with Foxboro in their Chicago office.

D. M. Nielsen J. C. Fryer

In 1945, Nielsen & Fryer, Inc., was formed specializing in sales and service of instruments and automatic control equipment.

N.E.G.A. Elects New Board of Directors

At a meeting of the Operating Division of the New England Gas Assn. in Boston, Jan. 29th, the following new board of directors was elected to take office on April 1, 1947:

Chairman: C. W. Rainville, Jr., Salem Gas Light Co.

Vice-Chairman: E. R. Clark, Lynn Gas & Elec. Co.

Secretary-Treasurer: G. C. Pearl, The Conn. Lt. & Pr. Co., Norwalk.

Directors: S. F. McCallister, Manchester Gas Co.; R. B. Barger, The Hartford Gas Co.; J. S. Carter, Brockton Gas Light Co.; H. C. Jones, New England Power Service Co.; E. F. Kennedy, Malden and Melrose Gas Light Co.; Donald Whitcomb, Providence Gas Co.

Rockwell Introduces New Small Gas Meter

The Pittsburgh Equitable Meter Division of Rockwell Manufacturing Company recently introduced their new Rockwell-Emco No. 00 Gas Meter designed to measure manufactured, natural and LP-gas. This meter is much smaller and lighter in weight than conventional designs. It measures 8" long by 7 7/16" wide by 10 5/16" high. The net weight is but 8½ lb.

The outer casing consists of two streamlined aluminum alloy pressure castings that are joined with a single gasket.

The double diaphragm displacement measuring unit has a maximum capacity of 150 cfh at ½" absorption of .06 sp. gr. natural or manufactured gas. When used to measure LP-gas the capacity rating is 90 cfh at ½" pressure absorption of 1.5 sp. gr. gas. This meter is optionally furnished with female pipe tap side or male threaded top connections.

R. S. Agee Establishes Sales Agency

R. S. (Bob) Agee has announced his resignation as Vice President and Director of Roberts & Mander Corporation of Hatboro, Pa., in order to establish his own manufacturers sales agency and wholesale marketing business.

Temporary headquarters will be located at 237 North Bent Road, Wyncote, Philadelphia, Pa. Plans call for concentrated coverage of utility and retail outlets in the adjacent Mid-Atlantic area.

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Servel Makes Changes in Regional Personnel

Servel, Inc., Evansville, Ind., has made several changes in its regional personnel, according to an announcement by George S. Jones, Jr., vice-president in charge of sales. All changes are effective March 1.

C. A. Miller, who has been Servel west coast regional manager for 11 years, headquartering in San Francisco, has resigned to become a Servel distributor in Los Angeles.

Operating as Gas Appliances, Inc., Mr. Miller will take over the distribution of the Servel refrigerator, water heater and kitchen accessories. Mr. Miller has been with Servel since its earliest days, serving in various capacities in the service and sales division.

Seward Abbott, now Servel regional manager in Dallas, Tex., has been appointed to succeed Mr. Miller as west coast manager. He has been associated with Servel since 1926.

W. K. Grube, present regional manager in Evansville, will go to Dallas to replace Mr. Abbott and O. F. Keune, currently district manager, with headquarters in Atlanta, has been appointed to succeed Mr. Grube.

Servel Offers Special Wrench for Service Men

Servel, Inc., through its household refrigeration service division, is making available to service departments, a newly designed wrench. The wrench is especially designed for use in servicing refrigerator controls, according to J. C. Kellner, Jr., Servel service manager.

The new wrench has a 7/16 inch opening to fit the seal screws of all burners used prior to that on the 1947 S model Servel refrigerator. It also fits the seal screws of the S model gas thermostat.

A ½ inch opening fits the seal screws of all burners on the S model and a ⅜ inch opening fits the orifice spud of all burners.

Laclede Gas Light Sale Approved by S.E.C.

The $11,250,000 sale of St. Louis (Mo.) County Gas Co. by the North American Co. to Laclede Gas Light Co., also St. Louis, has been approved by the Securities and Exchange Commission.

EDWIN L. WHITE

Edwin L. White, former executive of The Laclede Gas Light Company, St. Louis, died February 11th. At the time of his retirement from active service with Laclede because of illness in May, 1941, White was vice-president and a member of the Board of Directors.

Mr. White came to Laclede in 1922 from the Missouri Public Service Commission, where he had served nine years, holding the position of chief accountant at the time of his transfer. He had been with Laclede but a short time, when he was named Comptroller and elected to the Board of Directors. He was elected Secretary-Treasurer in February, 1932, and on January 3, 1941, was made a vice-president.

Plastic Piping

(Continued from page 18)

the surface of the material, causes a fusion of the pipe and the sleeve and forms a homogeneous joint that resists pulling apart.

The riser end of the service assembly is made with copper pipe joined to the plastic pipe with a compression sleeve. Tests of the assembly are made by conventional methods under pressure considerably higher than that which the pipe is expected to sustain normally.

The connection to the gas main is also made with a sleeve coupling joining the plastic pipe to the service tee. The flexible characteristic of plastic pipe has been found to be of considerable advantage in installing it in trenches. The plastic tubing can be bent around curves with ease. It can be bent by hand to extend around curves and jogs in the trench where steel pipe would have to be bent to the shape of the trench with a pipe bending machine.

Plastic Installations to Be Resumed

Southern California Gas Company tests have shown that plastic pipe has sufficient resilience and strength to prevent it from being crushed or cracked under the weight of the trench backfill. Installation in soils containing rocks, however, is avoided.

In February, the company was planning to resume plastic service installations on a limited basis. Sleeve-type couplings, Mr. Bradfield declared, had by that time become available in considerable quantity and, he said, that in the light of recent laboratory tests it appeared that the major obstacle to the use of plastic tubing had been overcome.

Clinker Removal

(Continued from page 25)

also allows enough swing and freedom in the hose between the 3 generator doors. Air is delivered to the opposite side of the generator by a one-inch pipe line running along the walls of the building under the operating floor.

Actual operation of the air gun is by two men, because it has been found that its control and efficiency are at their peak when two men are employed and the work of each man is lightened thereby. One man guides the bar while the other operates the gun; both men exerting a forward thrust on the gun, which quickens the penetration rate of the bar into the clinker. It normally requires about ten seconds for the bar to reach its full length of travel; about fifteen such penetrations are made in each door and they, plus the momentum gained in the swinging motion of the gun usually suffice in breaking the clinker thoroughly.

The raising and lowering of the gun and bar by the Chainfalls enables the bar to be used at any desired angle.

While the cleaning time remains practically unchanged on 19 hours operation as compared to the average of 15 hours, it undoubtedly would require an additional 15 minutes without the aid of the air tools. The normal cleaning time averages about 65 minutes.

We feel that the use of air tools has been worth while, and, as to the men, they are less tired than when they use straight cutting bars and hammers; they recognize this gun as an aid and are willing to use it because it does lighten their work.

This has been our experience to date; and, as we continue fire cleaning with air tools, new ways will be tried to further improve a phase in gas production which has been in need of study for a long time.

Paper presented at the Operating Division Meeting, New England Gas Assn., Boston, Jan. 29th, 1947.

Natural Gas Sales Conference

(Continued from page 48)

Servel, Inc. Tracing the history of gas refrigeration from its birth twenty years ago, with pictorial slides, Mr. Howard showed the progress that had been made both in style and market acceptance in the two decades that have passed since Servel introduced its first water-cooled refrigerator.

Stressing the salient features of the 1947 model, Mr. Howard declared that there was now no limit to sales achievement on gas refrigeration save that of production capacity plus ability to contact prospective customers. He said that Servel hopes to attain a daily production greatly exceeding anything his company had ever done before and predicted an eventual production of four to five hundred thousand units annually.

At the closing session Friday afternoon, at which Christy Payne, Jr., Sales Manager, The Peoples Natural Gas Co., presided, some interesting and illuminating facts relating to people and money were presented by Donald Thompson, Vice-President in Charge of Research, Federal Reserve Bank of Cleveland, Ohio. He pointed out the large gains that had been made in cash and demand deposits held by the public during the war years, during a time when consumer goods were not freely available, particularly in the heavy durable goods categories.

Recent surveys indicate that since the end of the war, consumer purchases were largely being financed out of earnings and that little change was appearing in savings. He also predicted that as more heavy durable goods such as gas appliances and equipment came into the market, buying which already has become more selective, may be financed through consumer credit or installment buying rather than out of savings. If supplies become available, Mr. Thompson predicted, the largest number of building units in the history of the nation, will be erected in the next twelve to eighteen months. This program will present a great potential market for gas utility and gas appliance manufacturing companies, he said.

House-to-house contact work should be an important part of the sales program of gas utility companies, A. C. Fox District Manager, Fuller Brush Company, told the sales executives. Drawing on his broad experience in hiring and training salesmen for this branch of salesmanship, the Fuller Brush Executive outlined the qualifications he looked for in engaging such men. Stressing the importance of Mrs. Housewife as the final judge of the product and the service of a company, Mr. Fox presented some of the major reactions encountered by house-to-house contact workers and the methods his own company employed to meet these reactions.

The conference ended on a note of hospitality with a Valentine Party sponsored by 31 gas appliance manufacturers at which Harold Massey, G.A.M.A., William Worth, Bendix, and Malcolm Scott, Ruud Manufacturing Company, acted as hosts.

Stewart-Warner Appoints Pingrey, Adv. Mgr.

Harlan G. Pingrey has been appointed advertising manager for the South Wind Division of Stewart-Warner Corporation, it was announced recently by S. E. Heymann, sales manager of the Indianapolis plant.

The South Wind Division, located at Indianapolis, manufactures and distributes the new "South Wind" midget gas fired furnace.